

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING DO-C9	PAGE OF 1   134 PAGES
2. CONTRACT NO.	3. SOLICITATION NO. 1-122-1150.3059	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED 4/15/94	6. REQUISITION/PURCHASE NO. <b>REQUISITION</b>
7. ISSUED BY National Aeronautics and Space Administration Langley Research Center Hampton, VA 23681-0001		8. ADDRESS OFFER TO (If other than Item 7) 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 4:00 PM local time 5/31/94  
(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)
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**OFFER (Must be fully completed by offeror)**

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

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

13. DISCOUNT FOR PROMPT PAYMENT (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
19. ACCEPTED AS TO ITEMS NUMBERED			18. OFFER DATE

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

20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)( ) <input type="checkbox"/> 41 U.S.C. 253(c)( )	23. SUBMIT INVOICES TO ADDRESS SHOWN IN ITEM (4 copies unless otherwise specified)	
24. ADMINISTERED BY (If other than Item 7) CODE	25. PAYMENT WILL BE MADE BY CODE	
	Financial Management Division Mail Stop 175, NASA, Langley Research Center Hampton, VA	
26. NAME OF CONTRACTING OFFICER (Type or print)  ROSEMARY C. FROEHLICH	27. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	28. AWARD DATE

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

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PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 SCOPE OF WORK

A. The Contractor shall, except as otherwise specified herein, furnish all personnel, facilities, services, equipment, supplies, and materials necessary for the performance of computational analysis and programming support services as broadly described in Section C, Description/Specifications/Work Statement.

B. Specific detailed performance requirements within the Statement of Work will be directed by the Government in accordance with the procedures outlined in G.4, Work Orders.

B.2 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 \$\_\_\_\_\_. This allotment is for Computational Analysis and Programming Support Services and covers the following estimated period of performance: \_\_\_\_\_.

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

B.3 ESTIMATED COST AND FIXED FEE (NASA 18-52.216-74)  
(DEC 1991)

The estimated cost of this contract is \$\_\_\_\_\_ exclusive of the fixed fee of \$\_\_\_\_\_. The total estimated cost and fixed fee is \$\_\_\_\_\_.

B.4 ADMINISTRATION OF CONTRACT FUNDING (LaRC 52.232-113) (JUL 1993)

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 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.

B.5 LEVEL-OF-EFFORT

A. In the performance of work under this contract, the Level-of-Effort (LOE) that the Contractor is obligated to provide is up to (TBD) direct labor hours as defined in paragraph B. below. The Level-of-Effort to be determined will include the Direct Labor Hours (DLH) for the Government Estimated Staffing (GES) (see Page 88) and may include DLH for non-GES (see Page 90).

B. "Direct labor hours" are those productive hours expended by Contractor personnel in performing work under this contract that are charged as direct labor under the Contractor's established accounting policy and procedures. The term does not include sick leave, vacation, holiday leave, military leave, or any type of administrative leave but does include overtime hours and direct labor hours provided under level-of-effort subcontracts.

C. Once the direct labor hours are reached or the contract term has ended, the Contractor's obligations under the contract are fulfilled, even though the specified work may not have been completed. The Contractor is not authorized to exceed the direct labor hours specified in Paragraph A above. Any estimated cost and fee(s) adjustments for additional direct labor hours shall be based solely upon those hours being added to the direct labor hours specified in this clause.

D. The fee, if any, is based upon the furnishing of the direct labor hours, including level-of-effort subcontract hours, specified in Paragraph A above. If the Contractor provides less than 90% of the specified hours prior to expiration of the contract term, and the Government has not invoked its rights under the Termination clause of this contract to adjust the contract for such reduced effort, the Contracting Officer may unilaterally make an equitable downward adjustment to the contract fee. The downward adjustment in fee will be based upon the difference between the direct labor hours specified in Paragraph A and the amount of direct labor hours provided by the Contractor. Prior to making such an adjustment, the Contracting Officer will request the Contractor provide a written discussion of any extenuating circumstances (e.g., productivity improvements or reductions in contract scope) which contributed to the underrun. Any information provided by the Contractor will be considered by the Contracting Officer in determining the amount of the downward adjustment in fee.

### SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

#### C.1 STATEMENT OF WORK - COMPUTATIONAL ANALYSIS AND PROGRAMMING SUPPORT SERVICES

##### A. SCOPE

The Contractor shall, except as otherwise specified herein, furnish all personnel, facilities, equipment, materials, and transportation, necessary to perform tasks as defined in work orders issued by the Government to support basic and applied aerospace research at the Langley Research Center (LaRC).

The work to be performed is in the scientific computing and flight software development areas. Work orders will be issued to provide direct computational analysis and programming support to specific research or flight projects and to provide general purpose computer applications support to the LaRC Central Scientific Computing Complex (CSCC).

**B. WORK AREA REQUIREMENTS****1. Direct Support to Research and Flight Projects**

The Contractor shall provide direct computational analysis and programming services in support of aerospace research projects at LaRC. This activity includes the mathematical modeling of physical systems; the determination of computational techniques and algorithms for the solution of the resulting mathematical problems on appropriate computer systems; and the development or adaptation of computer codes to implement the solution process. It also includes the establishment of data management systems, graphical interfaces, and software for combining computer programs to provide for integrated analyses of multidisciplinary research projects. User-oriented documentation shall be provided for application software systems.

The Contractor shall support the development of mission software for space and avionics flight projects such as the Terminal Area Productivity (TAP) Program, the Clouds and the Earth's Radiant Energy System (CERES) Project, and the Lidar In-space Technology Experiment (LITE) Project. Embedded flight software systems shall be developed to provide real-time instrument control and data acquisition. Ground computer software systems shall be developed to support instrument development, test, calibration, commanding, and simulation. Programming languages required include, but are not limited to Ada, FORTRAN, C, C++, and Assembly. Project documentation shall be provided for software systems.

**2. General Purpose Support**

The Contractor shall provide general support in computer-related activities focused around the following capabilities of the CSCC:

**a. High-Performance Computing**

High performance computing support includes the effective and efficient use of networks of heterogeneous or homogeneous resources which may be comprised of vector supercomputers, highly parallel computers and workstation clusters. Requirements include but are not limited to:

- Facilitate the development, debugging, performance analysis, and optimization of user applications.
- Benchmark, test, and evaluate new architectures and software.

**b. Surface Modeling and Grid Generation**

Surface modeling and grid generation support includes the production of accurate surface definitions and numerical grids for Computational Fluid Dynamics (CFD), Computational Structural Mechanics (CSM), and other engineering analyses. This work is centered in the Geometry Laboratory (GEOLAB). Requirements include but are not limited to:

- Create and modify numerical surface models to be compatible with software tools using multi-block structured or unstructured grid generation techniques.

- Generate numerical grids compatible with analysis software and geometry.

- Analyze grid quality and validate surface modeling and grid generation integrity.

- Incorporate surface model measurements acquired using digital scanners into surface models.

- Develop software and user interfaces to integrate use of geometry tools.

c. Data Visualization

Data visualization support involves core efforts in graphics, image processing, animation, and multimedia, primarily in support of the Data Visualization and Animation Laboratory (DVAL). These efforts are normally combined to define an integrated solution to a visualization problem. Requirements include but are not limited to:

- Generate computer animations and photo-realistic simulations.

- Enhance and analyze static and dynamic digital images.

- Digitize negatives, positives, and videos.

- Create multimedia presentations.

- Develop software applications, user interfaces, and device drivers.

d. Data Management

Data management support includes data modeling, data tracking, data presentation and program integration. Requirements include but are not limited to:

- Develop general purpose methodologies and software tools.

- Develop graphical user interface (GUI) for data management applications.

- Provide administration of database management systems.

e. Software Engineering

Software engineering support includes the definition, implementation, and continuous improvement of complete software development lifecycles for LaRC research programs. The primary focus of this area is mission software development for LaRC space and avionics flight programs supported by the Software Engineering and Ada Lab (SEAL). Requirements include, but are not limited to:

- Develop and continually update process guidebooks.
- Evaluate and implement new technologies and methods.
- Select and use Computer Aided Software Engineering (CASE) tools.
- Collect and analyze process and product metrics to improve reliability, productivity, and system performance.
- Operate and administer the SEAL software development environment.
- Implement and operate real-time embedded system tools, such as emulators and logic analyzers.

f. Mathematical Software

Mathematical software support includes vendor provided and locally written libraries that exploit the architectural features of the CSCC high performance computers. Requirements include but are not limited to:

- Develop, and implement state-of-the-art numerical algorithms.
- Install and test mathematical libraries.

g. Training

Training support includes the instruction of users and potential users of computers at LaRC in basic skills such as the use of the UNIX operating system and the X Window System graphical environment. Requirements include but are not limited to:

- Develop training courses and associated documentation such as outlines, tutorial handouts, workbooks, viewgraphs, and video tapes.
- Assist in preparation and updating of teaching materials and methods.
- Conduct and administer these courses on a prescribed schedule.

### C. GENERAL REQUIREMENTS

In the planning and execution of work orders discussed in Section C, C.1, Paragraph B, the Contractor shall undertake any or all of the following functions:

#### 1. Requirements Analysis and Planning

Analyze requirements to determine the feasibility of providing the desired software, target computer system, computer programs, results, documentation or other deliverables, and develop a plan for accomplishing the work. The plan shall include the scope of the work; a technical discussion of the requirements and the proposed methods for satisfying them; designation of computer development and target systems; deliverable items; risk analysis; and estimates of manpower and schedule. The plan shall be submitted to LaRC for approval prior to implementation.

#### 2. Software Design and Development

Design, develop, and test software to meet specified technical and quality requirements.

#### 3. Configuration Management

Perform configuration management and change control on installed software and documentation.

#### 4. Software Modification, Maintenance, and Conversion

Modify, maintain and/or convert existing software in order to extend its function; improve its utility, accuracy, or reliability; decrease required resources; or make it compatible with upgraded operating systems or other computer systems. Maintain associated documentation.

#### 5. Operations

Assemble and format input data and execute computer programs for system operations, testing, and obtaining research results.

#### 6. Documentation

Develop documentation such as user manuals, reference manuals, design documents, and test plans using either online or hard copy format. The documentation shall be written to conform to the NASA Documentation Standard (NASA-STD-2100-91).

#### 7. Problem Analysis

Perform independent analysis of mathematical, logical, system approaches and perform comparison studies of competing techniques to solve problems.

8. Consultation and Training

Provide individual and open-shop consultation. Provide and coordinate demonstrations of technical capabilities. Conduct seminars and participate in expositions.

9. Systems Administration

Provide systems administration services for workstations and distributed computer systems.

10. Process Improvement

Collect and analyze process and product metrics. Identify, evaluate, and implement promising new technologies to improve productivity and quality.

SECTION D - PACKAGING AND MARKING

D.1 REPORTS AND DOCUMENTATION PACKAGING AND MARKING

All reports and other documentation required to be delivered under this contract shall be packaged/packed for mailing/shipment in such a manner as to insure safe arrival at destination. Marking of reports and other documentation shall be as set forth in Exhibit A, Contract Documentation Requirements.

SECTION E - INSPECTION AND ACCEPTANCE

E.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) (OCT 1992)

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

The period of performance of this contract shall be 12 months from the effective date of the contract.

#### F.3 PLACE(S) OF PERFORMANCE (LARC 52.212-98) (OCT 1992)

The place(s) of performance shall be:

The Contractor's facility; NASA, Langley Research Center, Hampton, Virginia; and other sites as may be designated by work orders.

### SECTION G - CONTRACT ADMINISTRATION DATA

#### G.1 SUBMISSION OF VOUCHERS FOR PAYMENT (NASA 18-52.216-87) (DEC 1988)

(a) Public vouchers for payment of cost shall include a reference to this contract NAS1- and be forwarded to:

TBD

This is the designated billing office for cost vouchers for purposes of the Prompt Payment clause of this contract.

(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; and
- (v) Copy 5 Contracting Officer Technical Representative

(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.

G.2 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 below or 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 its 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.

G.3 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.

(a) Work area space in the Data Visualization and Animation Laboratory (DVAL), the Numerical Geometry Laboratory (GEOLAB) and the Software Engineering and Ada Laboratory (SEAL).

(b) The Contractor shall use Government telephones for official purposes only.

(c) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty. Physical examinations for personnel who serve in a support role on a NASA research aircraft.

(d) Cafeteria privileges for Contractor employees during normal operating hours.

(e) 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.

#### G.4 WORK ORDERS (LaRC 52.212-101) (OCT 1991)

A. The work to be performed within the areas outlined in Section C, Description/Specifications/Work Statement, 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 Technical Representative upon completion of the work specified therein, containing, 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.5 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.

### SECTION H - SPECIAL CONTRACT REQUIREMENTS

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

Except for data contained on pages \_\_\_\_\_, 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 \_\_\_\_\_, 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 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.4 OPTIONS

##### A. Priced Options/Extended Term

Pursuant to the Section I clause entitled "Option to Extend the Term of the Contract (MAR 1989)," the Contractor hereby grants to the Government options

to extend the term of the contract for four additional periods of 12 months each. Such options are to be exercisable by issuance of a unilateral modification. Upon exercise of such option(s) by the Government, the following items will be increased by the amount specified below for each option period.

<u>Item</u>	<u>First Option Period</u>	<u>Second Option Period</u>	<u>Third Option Period</u>	<u>Fourth Option Period</u>
Period of Performance (Ref. F. )	12 months	12 months	12 months	12 months
Level of Effort (Ref. B. )	TBD hours	TBD hours	TBD hours	TBD hours
Estimated Cost (Ref. B. )	\$	\$	\$	\$

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 hours specified below for each period. The Government's options may be exercised once or multiple times in minimum increments of 1,875 hours. Such options are to be exercisable by issuance of a unilateral modification. The Government shall give the Contractor 30 days preliminary written notice(s) for the exercise of any increment(s) of this option. Preliminary notice shall not commit the Government to exercise the option.

	<u>Level of Effort (Ref. B. )</u>
Initial Contract Period	18,750 hours
First Option Period	22,500 hours
Second Option Period	28,125 hours
Third Option Period	33,750 hours
Fourth Option Period	37,500 hours

2. When any increment of the above option is exercised, the contract cost and fee set forth in B.3, will be increased using the appropriate rates set forth below for the period in which the option is exercised:

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

#### H.5 CONTRACTOR EMPLOYEE'S SECURITY CLEARANCE (LaRC 52.204-90) (OCT 1992)

By virtue of their particular work assignment, certain Contractor employees, may be required to have a security clearance granted in accordance with DOD 5220.22M, "Department of Defense Industrial Security Manual for the Safeguarding of Classified Information (ISM)". Clearances will be issued by the Department of Defense (DOD). Within 10 working days after an employee is identified by the Government and/or the Contractor as requiring a SECRET or higher clearance, the Contractor shall submit to the Contracting Officer evidence of the submittal of a request for clearance to DOD for such employee. If the clearance for an employee has not been issued by DOD within 120 calendar days of the submittal of the request for clearance to DOD, the Contractor may be required to remove the employee from the contract.

#### H.6 SECURITY PROGRAM/FOREIGN NATIONAL EMPLOYEE INVESTIGATIVE REQUIREMENTS (LaRC 52.204-91) (NOV 1991)

Prior to reporting to Langley Research Center (LaRC) to perform under a contract or grant, each Foreign National shall have approval for access to LaRC facilities from NASA Headquarters, International Relations Division (Code XID). A copy of the access authorization request shall be provided to the LaRC Chief of Security. Additionally, an investigation by the Government shall be completed on each Foreign National contractor prior to reporting to LaRC to perform under a contract or grant. A properly executed "Name Check Request" (NASA Form 531) and a completed "applicant" fingerprint card shall be submitted to the LaRC Security Office, Mail Stop 182, for each Foreign National contractor at least 75 days prior to the estimated entry on duty date. The NF 531 and fingerprint card may be obtained from the LaRC Security Office. If the access approval is obtained from

NASA Headquarters prior to completion of the investigation, and the Contracting Officer requires a Foreign National to work on LaRC, an escort request may be considered by the LaRC Chief of Security.

H.7 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.8 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.9 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.

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 SUBCONTRACTING PLAN\*

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.12 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.13 FLIGHT PHYSICALS

In accordance with Langley Management Instructions 1800.1, all Contractor personnel who serve in a support role on a NASA research aircraft flight, regardless of the duration of the flight or nature of the support role, are required to obtain physical examinations equivalent to FAA Class III requirements.

\*Not applicable to Small Business.

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

Pursuant to the Code of Federal Regulations (14 CFR, Ch 1., Section 61.23), the physical examinations are required biennially. The Contractor shall provide to the Contracting Officer confirmation of examinations which certify applicable personnel for flight work.

## PART II - CONTRACT CLAUSES

### SECTION I - CONTRACT CLAUSES

#### I.1. LISTING OF CLAUSES INCORPORATED BY REFERENCE:

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference.

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

<u>CLAUSE NUMBER</u>	<u>TITLE AND DATE</u>
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 (NOV 1992)
52.210-5	New Material (APR 1984)
52.212-8	Defense Priority and Allocation Requirements (SEP 1990)
52.215-1	Examination of Records by Comptroller General (FEB 1993)
52.215-2	Audit - Negotiation (FEB 1993)
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)  
52.222-26 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)  
52.227-14 Rights in Data - General (JUN 1987) -- as modified by NASA  
FAR Supplement 18-52.227-14  
52.228-7 Insurance - Liability to Third Persons (APR 1984)  
52.230-2 Cost Accounting Standards (AUG 1992)  
52.230-5 Administration of Cost Accounting Standards (AUG 1992)  
52.232-9 Limitation on Withholding of Payments (APR 1984)  
52.232-17 Interest (JAN 1991)  
52.232-22 Limitation of Funds (APR 1984)  
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)  
52.249-6 Termination (Cost-Reimbursement) (MAY 1986)  
52.249-14 Excusable Delays (APR 1984)  
52.251-1 Government Supply Sources (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>
18-52.204-70	Report on NASA Subcontracts (NOV 1992)
18-52.204-71	NASA Contractor Financial Management Reporting (DEC 1988)
18-52.219-74	Use of Rural Area Small Businesses (SEP 1990)
18-52.219-75	Small Business and Small Disadvantaged Business Subcontracting Reporting (SEP 1992)
18-52.237-70	Emergency Evacuation Procedures (DEC 1988)
18-52.242-72	Observance of Legal Holidays (AUG 1992)
18-52.245-71	Installation-Provided Government Property (MAR 1989)

## I.2 CLAUSES IN FULL TEXT

The clauses listed below follow in full text:

52.252-2	Clauses Incorporated by Reference (JUN 1988)
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)
52.222-37	Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era (JAN 1988)
52.223-6	Drug-Free Workplace (JUL 1990)
52.232-25	Prompt Payment (SEP 1992)
52.242-13	Bankruptcy (APR 1991)
52.252-6	Authorized Deviations in Clauses (APR 1984)
18-52.204-75	Security Classification Requirements (SEP 1989)
18-52.204-78	Security Plan for Unclassified Automated Information Resources (JAN 1992)
18-52.208-81	Restrictions on Printing and Duplicating (AUG 1993)
18-52.219-76	NASA Small Disadvantaged Business Goal (JUL 1991)
18-52.223-70	Safety and Health (DEC 1988)
18-52.228-75	Minimum Insurance Coverage (OCT 1988)
18-52.242-70	Technical Direction (SEP 1993)
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.3 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.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 60 months the time specified in the schedule; 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 60 months the time specified in the schedule.

#### 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 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.10 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.11 PROMPT PAYMENT (FAR 52.232-25) (SEP 1992)

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, meat food products, or fish; 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 fresh or frozen fish, as defined in Section 204(3) of the Fish and Seafood Promotion Act of 1986 (16 U.S.C. 4003(3)), will be as close as possible to, but not later than, the seventh day after product delivery.

(iii) 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.

(iv) 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.

(v) If the contract does not require submission of an invoice for payment (e.g., period lease payments), the due date will be as specified in the contract.

(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, meat food products, or fish, 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, meat food products, or fish, 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.12 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.13 AUTHORIZED DEVIATIONS IN CLAUSES (FAR 52.252-6) (APR 1984)

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

(b) The use in this solicitation or contract of any NASA/FAR Supplement (48 CFR Chapter 18) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

#### I.14 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 B.

#### I.15 SECURITY PLAN FOR UNCLASSIFIED AUTOMATED INFORMATION RESOURCES (NASA 18-52.204-78) (JAN 1992)

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.16 RESTRICTIONS ON PRINTING AND DUPLICATING (NASA 18-52.208-81) (AUG 1993)

(a) The Contractor shall reproduce any documentation required by this contract in accordance with the provisions of the Government Printing and Binding Regulations, No. 26, S. Pub 101-9, U.S. Government Printing Office, Washington DC, 20402, published by the Joint Committee on Printing, U.S. Congress.

(b) The Contractor shall not perform, or procure from any commercial source, any printing in connection with the performance of work under this contract. The term "printing" includes the processes of composition, platemaking, presswork, silk screen processes, binding, microform, and the end items of such processes and equipment.

(c) "Duplicating/copying" is not considered to be printing. It is material produced by duplicating equipment employing the lithographic process and automatic copy-processing or copier-duplicating machines employing electrostatic, thermal, or other copying processes not requiring the use of negatives or metal plates. The Contractor is authorized to duplicate production units provided the requirement does not exceed 5,000 production units of any one page or 25,000 units

in the aggregate of multiple pages. Such plates may not exceed a maximum image size of 10-3/4 by 14-1/4 inches. A "production unit" is one sheet, size 8-1/2 x 11 inches (215 x 280mm), one side only, and one color ink.

(d) This clause does not preclude writing, editing, preparation of manuscript copy, or preparation of related illustrative material as a part of this contract, or administrative duplicating/copying (for example, necessary forms and instructional materials used by the Contractor to respond to the terms of the contract).

(e) Costs associated with printing or duplicating/copying in excess of the limits set forth above are unallowable without prior written approval of the Contracting Officer. If the Contractor has reason to believe that any activity required in fulfillment of the contract will necessitate any printing or substantial duplicating/copying, it immediately shall provide written notice to the Contracting Officer and request approval prior to proceeding with the activity. Requests will be processed by the Contracting Officer in accordance with the provisions of the Government Printing and Binding Regulations and NFS 18-8.802.

(f) The Contractor shall include in each subcontract which may involve a requirement for any printing and/or any duplicating/copying in excess of the limits specified in Paragraph (c) of this clause, a provision substantially the same as this clause, including this Paragraph (f).

#### I.17 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.18 SAFETY AND HEALTH (NASA 18-52.223-70) (DEC 1988)

(a) The Contractor shall take all reasonable safety and health measures in performing under this contract and shall, to the extent set forth in the Contract Schedule, submit a safety plan and a health plan for the Contracting Officer's approval. The Contractor shall comply with all Federal, State, and local laws applicable to safety and health in effect on the date of this contract and with the safety and health standards, specifications, reporting requirements, and provisions set forth in the Contract Schedule.

(b) The Contractor shall take or cause to be taken such other safety and health measures the Contracting Officer may reasonably direct. To the extent that the Contractor may be entitled to an equitable adjustment for those measures under the terms and conditions of this contract, the equitable adjustment shall be determined pursuant to the procedures of the changes clause of this contract; provided, that no adjustment shall be made under this safety and health clause for any change for which an equitable adjustment is expressly provided under any other provision of the contract.

(c) The Contractor shall immediately notify and promptly report to the Contracting Officer or a designee any accident, incident, or exposure resulting in fatality, lost-time occupational injury, occupational disease, contamination of property beyond any stated acceptable limits set forth in the Contract Schedule, or property loss of \$25,000 or more arising out of work performed under this contract. The Contractor is not required to include in any report an expression of opinion as to the fault or negligence of any employee. Service contractors (excluding construction contracts) shall provide quarterly reports specifying lost-time frequency rate, number of lost-time injuries, exposure, and accident/incident dollar losses as specified in the Contract Schedule. The Contractor shall investigate all work-related incidents or accidents to the extent necessary to determine their causes and furnish the Contracting Officer a report, in such form as the Contracting Officer may require, of the investigative findings and proposed or completed corrective actions.

(d) (1) The Contracting Officer may notify the Contractor in writing of any noncompliance with this clause and specify corrective actions to be taken. The Contractor shall promptly take and report any necessary corrective action.

(2) If the Contractor fails or refuses to institute prompt corrective action in accordance with subparagraph (1) above, the Contracting Officer may invoke the stop-work order clause in this contract or any other remedy available to the Government in the event of such failure or refusal.

(e) The Contractor (or subcontractor or supplier) shall insert the substance of this clause, including this paragraph (e) and any applicable Schedule provisions, with appropriate changes of designations of the parties, in subcontracts of every tier that (1) amount to \$1,000,000 or more (unless the Contracting Officer makes a written determination that this is not required), (2) require construction,

repair, or alteration in excess of \$25,000, or (3) regardless of dollar amount, involve the use of hazardous materials or operations.

(f) Authorized Government representatives of the Contracting Officer shall have access to and the right to examine the sites or areas where work under this contract is being performed in order to determine the adequacy of the Contractor's safety and health measures under this clause.

(g) As a part of the Contractor's safety plan (and health plan, when applicable) and to the extent required by the Schedule, the Contractor shall furnish a list of all hazardous operations to be performed, including operations indicated in paragraphs (a) and (b) above, and a list of other major or key operations required or planned in the performance of the contract, even though not deemed hazardous by the Contractor. NASA and the Contractor shall jointly decide which operations are to be considered hazardous, with NASA as the final authority. Before hazardous operations commence, the Contractor shall submit for NASA concurrence either or both of the following as required by the Contract Schedule or by the Contracting Officer:

- (1) Written hazardous operating procedures for all hazardous operations.
- (2) A certification program for personnel involved in hazardous operations.

#### 1.19 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."

## I.20 TECHNICAL DIRECTION (NASA 18-52.242-70) (SEP 1993)

(a) Performance of the work under this contract is subject to the written technical direction of the Contracting Officer's Technical Representative (COTR), who shall be specifically appointed by the Contracting Officer in writing in accordance with NASA FAR Supplement 18-42.270. "Technical direction" means a directive to the Contractor that approves approaches, solutions, designs, or refinements; fills in details or otherwise completes the general description of work or documentation items; shifts emphasis among work areas or tasks; or furnishes similar instruction to the Contractor. Technical direction includes requiring studies and pursuit of certain lines of inquiry regarding matters within the general tasks and requirements in Section C of this contract.

(b) The COTR does not have the authority to, and shall not, issue any instructions purporting to be technical direction that -

(1) Constitutes an assignment of additional work outside the statement of work;

(2) Constitutes a change as defined in the changes clause;

(3) In any manner causes an increase or decrease in the total estimated contract cost, the fixed fee (if any), or the time required for contract performance;

(4) Changes any of the expressed terms, conditions, or specifications of the contract; or

(5) Interferes with the Contractor's rights to perform the terms and conditions of the contract.

(c) All technical direction shall be issued in writing by the COTR.

(d) The Contractor shall proceed promptly with the performance of technical direction duly issued by the COTR in the manner prescribed by this clause and within the COTR's authority. If, in the Contractor's opinion, any instructions or direction by the COTR falls within any of the categories defined in paragraph (b) above, the Contractor shall not proceed but shall notify the Contracting Officer in writing within 5 working days after receiving it and shall request the Contracting Officer to take action as described in this clause. Upon receiving this notification, the Contracting Officer shall either issue an appropriate contract modification within a reasonable time or advise the Contractor in writing within 30 that the instruction is -

(1) Rescinded in its entirety; or

(2) Within the requirements of the contract and does not constitute a change under the changes clause of the contract and that the Contractor should proceed promptly its performance.

(e) A failure of the Contractor and Contracting Officer to agree that the instruction or direction is both within the requirements of the contract and does not constitute a change under the changes clause, or a failure to agree upon the contract action to be taken with respect to the instruction or direction shall be subject to the Disputes clause of this contract.

(f) Any action(s) taken by the Contractor in response to any direction given by any person other than the Contracting Officer or the COTR shall be at the Contractor's risk.

I.21 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.22 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 Contract Documentation Requirements, 6 pages
- Exhibit B Contract Security Classification Specification, DD Form 254, 2 pages
- Exhibit C List of Government-Furnished Property, 2 pages
- Exhibit D Procedures for the Preparation and Approval of Contractor Reports for Langley Research Center, Form PROC./P-72, May 1992, 4 pages
- Exhibit E Subcontracting Plan, 199 , pages (Not applicable to Small Business)
- Exhibit F Security Plan for Unclassified Federal Computer Systems, 1994, 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 Cost Proposal Forms A-C, 4 pages
- Attachment 5 Government Estimated Staffing Requirements and Minimum Position Qualifications, 7 pages
- Attachment 6 Key Personnel Requirements, 3 pages
- Attachment 7 Summary Description of the LaRC Central Scientific Computing Complex, 11 pages
- Attachment 8 Technical Questions, 3 pages
- Attachment 9 Monthly Progress Report for Socioeconomic Goals, 1 page

EXHIBIT A  
CONTRACT DOCUMENTATION REQUIREMENTS

EXHIBIT A - 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 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 45 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. Include company policies for the recruitment, hiring, training, and career development of individuals with disabilities. Also include programs for motivating and incentivizing employees to continuously improve and increase productivity.

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 costs shall be submitted for the initial 12-month period. Financial baseline plans for each of the remaining 12-month option periods shall be submitted within 10 days after the beginning of the option period. 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 initial and priced option periods.

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. The Financial Baseline Plan will be revised each time a contract modification is executed which increases or decreases the contract estimated cost for a reason other than an overrun. The Financial Baseline Plan shall not be revised to include overrun costs.

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, 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 motivate 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 Reg Tag System.

4. Accident Investigation and Reporting--Procedures for investigating and reporting accidents/incidents.

5. Health--Plans for insuring that audiograms and flight physicals required for performance of effort under this contract are obtained and maintained.

6. People with Disabilities--In accordance with the Americans with Disabilities Act, the plans should specify that prior to assigning a person with disabilities to this contract, the Contractor shall contact the Disability Program manager at (804) 864-7718.

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

E. Weekly Manpower Report--On a weekly basis, the Contractor shall submit a man-hour utilization report illustrating the actual man-hours expended against each assigned work order.

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

G. Semiannual Progress Report--The Contractor shall submit a Semiannual Progress Report summarizing work progress and manpower utilization for each assigned work order.

H. Technical Reports--When specified in work orders, the Contractor shall prepare formal technical reports conforming to the standards set forth in NASA Langley Form PROC./P-72, Procedures for the Preparation and Approval of Contractor Reports for Langley Research Center, Exhibit D.

NOTE: Approval copies shall be submitted to the COTR and notice of acceptance will be from the COTR in lieu of the Contracting Officer as specified in the PROC./P-72.

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

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

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. 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 other instructions on the reverse of the SF 294, the Contractor is required to report awards to Women-Owned (W-O) business, 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 small W-O businesses this report period: \$

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

The total subcontract dollars to W-O businesses, HBCUs, and MEIs shall be included in Blocks 15A and 16.

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 Subcontracting Reporting.

Pursuant to the contract clause entitled "Small Business and Small Disadvantaged Subcontracting Plan" (FAR 52.219-9 and 19.704(a)(5)), you are required to submit a letter progress report on a monthly basis. The "Monthly Progress Report for Socioeconomic Goals" shall be limited to the monthly data only (excluding cumulative data from beginning of Subcontract Plan) as required for Lines 15A, 15B, 15C, and 16 of the Standard Form 294. (See Section J, List of Attachments, Attachment 9.) Letter progress reports may be signed by the Contract Administrator or equivalent organizational level, and each report is due by the 10th calendar day of the month following the close of the reporting period.

M. Skill Mix and Wage Report--Within 30 calendar days after the effective date of this contract, the Contractor shall furnish to the Government as 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 1-122-1150.3059 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 these escalations, and the amount of cash awards or bonuses (if any).

N. Federal Contractor Veterans Employment Report--In compliance with Clause 52.222-37, Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era, the Contractor shall submit the Federal Contractor Veterans Employment Reports (VETS-100) as required by this clause.

O. Evidence of Insurance--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.

P. Virginia and Local Sales Taxes--In accordance with Section H.10, you are required to submit a copy of the letter sent to the Virginia Tax Commission and a copy of the subsequent response.

## II. DOCUMENT DISTRIBUTION REQUIREMENTS

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 157D

C--Cost Accounting, Mail Stop 135

D--Safety Manager, Mail Stop 429

E--Acquisition Support Branch, Mail Stop 144

F--Programs and Resources Division, Mail Stop 104

G--Industrial Property Office, Mail Stop 377

H--Management Resources Office, Mail Stop 105

I--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, C-2, F-1, H-1

Management and Operations Plan and Revisions	A-2, B-5
Safety and Health Plan	A-1, B-1, D-1
Weekly Manpower Report	B-3
Monthly Progress Report	A-1, B-3
Semiannual Progress Report	A-1, B-3
Quarterly Accident/Injury Report	A-1, B-1, D-1
Monthly Staffing Report	B-1
Report of Government-Owned/Contractor Held Property (NASA Form 1018)	A-1, B-1, G-4
Subcontracting Report for Individual Contracts (Standard Form 294)	A-1, E-1
Summary Subcontractor Report (Standard Form 295)	A-1, E-1, H-1
Report on NASA Subcontracts (NASA Form 667)	I-1
Monthly Progress Report for Socioeconomic Goals	A-1, E-1
Requisition and Invoice/Shipping Document (DD Form 1149)	G-1
Skill Mix and Wage Report	A-1
Federal Contractor Veterans Employment Report (VETS-100)	H-1
Virginia and Local Sales Tax Correspondence	A-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 B  
CONTRACT SECURITY CLASSIFICATION SPECIFICATION

DEPARTMENT OF DEFENSE CONTRACT SECURITY CLASSIFICATION SPECIFICATION <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i>				1. CLEARANCE AND SAFEGUARDING	
				a. FACILITY CLEARANCE REQUIRED <b>Secret</b>	
				b. LEVEL OF SAFEGUARDING REQUIRED <b>Confidential</b>	
2. THIS SPECIFICATION IS FOR: (X and complete as applicable)			3. THIS SPECIFICATION IS: (X and complete as applicable)		
a. PRIME CONTRACT NUMBER		X		a. ORIGINAL (Complete date in all cases) Date (YYMMDD) <b>940209</b>	
b. SUBCONTRACT NUMBER				b. REVISED (Supersedes all previous specs) Revision No. Date (YYMMDD)	
c. SOLICITATION OR OTHER NUMBER		Due Date (YYMMDD) <b>940630</b>		c. FINAL (Complete item 5 in all cases) Date (YYMMDD)	
X <b>1-122-1150.3059</b>					
4. IS THIS A FOLLOW-ON CONTRACT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> 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 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: In response to the contractor's request dated _____, retention of the 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)	
N/A		N/A		N/A	
7. SUBCONTRACTOR					
a. NAME, ADDRESS, AND ZIP CODE		b. CAGE CODE		c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)	
N/A		N/A		N/A	
8. ACTUAL PERFORMANCE					
a. LOCATION		b. CAGE CODE		c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)	
N/A		N/A		N/A	
9. GENERAL IDENTIFICATION OF THIS PROCUREMENT					
Computational Analysis and Programing Support Services.					
10. THIS CONTRACT WILL REQUIRE ACCESS TO:				11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:	
	YES	NO		YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION		X	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY		X
b. RESTRICTED DATA		X	b. RECEIVE CLASSIFIED DOCUMENTS ONLY		X
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		X	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL	X	
d. FORMERLY RESTRICTED DATA		X	d. FABRICATE, MOOPY, OR STORE CLASSIFIED HARDWARE		X
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		X
(2) Non-SCI		X	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER		X
f. SPECIAL ACCESS INFORMATION		X	h. REQUIRE A COMSEC ACCOUNT		X
g. NATO INFORMATION		X	i. HAVE TEMPEST REQUIREMENTS		X
h. FOREIGN GOVERNMENT INFORMATION		X	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS		X
i. LIMITED DISSEMINATION INFORMATION		X	k. BE AUTHORIZED TO USE THE DEFENSE COUNSEL SERVICE		X
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. (FM 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.)

The contractor will be required to store machine produced printouts at their local facility. This will involve CONFIDENTIAL material only. SECRET material will not be removed from the Langley Research Center.

In the course of providing the required services, contractor activities may result in the generation of classified magnetic tape recordings or printed machine outputs. This material will be reviewed by the technical monitor who will recommend the appropriate classification to the classifying authority.

The protection and marking of all classified material will be in compliance with E.O. 12356 and the instructions set forth in Appendix II, Industrial Security Manual (DoD 5220.22M).

This gives notification that a limited number of contractor employees will be required to have SECRET clearances and this number will vary from time to time.

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 CLASSIFYING OFFICIAL

b. TITLE

c. TELEPHONE (Include Area Code)

O. I. Cole, Jr.

Security Classification Officer

(804) 864-3420

d. ADDRESS (Include Zip Code)

NASA Langley Research Center

MS 182

Hampton, VA 23681-0001

e. SIGNATURE

17. REQUIRED DISTRIBUTION

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

EXHIBIT C  
LIST OF GOVERNMENT-FURNISHED PROPERTY

## GOVERNMENT FURNISHED PROPERTY

NASA ECN	ITEM DESCRIPTION	MODEL/PART	Contractor SERIAL #	Acquired/Government MFG	Furnished MFG DATE	Equipment UNIT PRICE
	Display Unit	NCD-17c	13408591	NCD		\$2,595.00
	Disk Drive Unit	M2688	F0121T8M2688	Apple		\$1,187.00
	Disk Drive Unit	M22639A	J1611	Fujitsu		\$3,240.00
	Terminal, Data Processing	VT320-C2	HK01260180	Dec		\$362.00
	Terminal, Data Processing	VT320-C2	HK01260185	Dec		\$362.00
	Terminal, Data Processing	NCD17CPSK	3201010	NCD		\$4,260.00
	Capetronic		03203010	NCD		\$500.00
	Computer, Mini	4765C-8	014F0129	Sun		\$9,458.00
	Monitor	HM-4419	027CN1398	Sun		\$750.00
	Drive, CD ROM	X559H	36861108	Sun		\$667.00
	Disk, Subsystem	F63D-T2-Z	30063	CATA Tech Inc		\$2,725.00
	Computer, Micro	NCD17CP3	0391C00719	NCD		\$2,345.00
	Monitor	NCD17C	5207311	NCD		\$1,005.00
	Disk, Drive Unit	ST41200N	WJ005904	CITA Tech Inc		\$2,550.00
	Subsystem, Tape	TFH-028	AA561060	CITA Teac Inc		\$920.00
	Tape Drive	8700	35386	Atrecon Inc		\$2,324.00
	Printer, ADP	M6000	CA105PFL	Apple		\$3,925.00
	Computer, Micro	MAC11S180	F2119HYX	Apple		\$4,174.00
	Monitor, Color	M0401	7080760	Apple		\$680.00
	Interface, Ethernet	EP0100	011E0B	Dyna Comm		\$350.00
	Computer, Micro	48633DXC	245320	Gateway 2000		\$2,995.00
	Monitor	CS1572FS	MAL126263	Gateway		\$400.00
	Computer, Micro	48633DXC	245331	Gateway 2000		\$2,995.00
	Monitor	PMV1488	MA9710444	Gateway		\$400.00
	Computer, Micro	48633DXC	245332	Gateway 2000		\$2,995.00
	Monitor	PMV1488	MA9710677	Gateway		\$400.00
	Monitor	1420+	10600668	Goldstar Co		\$285.00
	Display Unit	NCD-17c	13408524	NCD		\$2,095.00
	Monitor	Network Comput	13408524	NCD		\$500.00
	Display Unit	NCD-19c	413992-150	NCD		\$1,100.00
	Monitor	HM-4419-D	413992-150	NCD		\$500.00
	Computer, Micro	48633DXC	1238270	Gateway 2000		\$2,045.00
	Monitor	CS1572FS	MHL131861	Gateway		\$400.00
	Computer, Micro	48633DXC	1238219	Gateway 2000		\$2,045.00
	Monitor	CS1572FS	MALA20267	Gateway		\$400.00
	Computer, Micro	48633DXC	1252969	Gateway 2000		\$2,445.00
	Monitor	CS1572FS	MALA14041	Gateway		\$400.00
	Display Unit	NCD-19c	41506078	NCD		\$2,797.00
	Monitor	HM-4419-D	415060-78	NCD		\$500.00
	Display Unit	NCD-19c	41506077	NCD		\$2,797.00
	Monitor	HM-4419-D	415060-77	NCD		\$500.00
	Display Unit	NCD-19c	41506075	NCD		\$2,797.00
	Monitor	HM-4419-D	415060-75	NCD		\$500.00
	Disk, Subsystem	ST42100N	TL504588	CITA		\$2,626.00
	Computer, Micro	4DX2-66V	1524473	Gateway 2000		\$2,435.00
	Monitor	CS1672FS	MHH122672	Gateway		\$400.00
	Computer, Micro	4DX2-66V	1524474	Gateway 2000		\$2,435.00
	Monitor	CS1572FS	MHH117350	Gateway		\$400.00
	Computer, Micro	4DX2-66V	1524475	Gateway 2000		\$2,435.00
	Monitor	CS1672FS	MHH118413	Gateway		\$400.00
	Computer, Micro	4DX2-66V	1524476	Gateway 2000		\$2,435.00
	Monitor	CS1572FS	MHH118830	Gateway		\$400.00
	Printer, Laser	J3481A	J128JG5RVJ	HP		\$817.00
	Printer, Laser	J3481A	J128JG5RTS	HP		\$817.00
	Computer, Micro	Baby AT	1866082	Gateway 2000		\$2,500.00
	Monitor	CS1672FS	MHL535129979	Gateway		\$400.00
	Computer, Micro	Baby AT	1866079	Gateway 2000		\$2,500.00
	Monitor	CS1572FS	MHL535130254	Gateway		\$400.00
G74355	Printer, Laser	Laser JT III	NONE	HP		\$1,529.00
G75929	Computer, Mini	4D/210VXG	S11650	Silicon Graphics		\$67,344.00
G75930	Display Unit	CM2086A196	YDF000154	Hitachi Mfg Co		\$17,000.00
G75931	Interface, Computer	P4XSCI	none	Silicon Graphics		\$750.00
G76268	Computer, Micro	M5840	F7490D2	Apple		\$5,293.00
G76269	Display Unit	M0401	5384391	Apple		\$626.00
G79420	Disk Drive Unit	NONE	8020603	CITA		\$1,795.00
G79421	Disk Drive Unit	NONE	8020610	CITA		\$1,795.00
55114	Scanner, Computer	726(1020)	7C72600737	Best Data Corp		\$2,350.00
61051	Display Unit	HM41195-AAC	994AR0540	Sun		\$5,680.00
61052	Computer, Mini	247	907F0301	Sun		\$4,072.00

61053	Display Unit	HM41195-AAC	903AR0485	Sun	\$5,680.00
61054	Computer, Mini	247	907F0587	Sun	\$4,032.00
62472	Disk Drive Unit	D5U-1-600B	7504	Artacon Inc	\$3,730.00
137613	Terminal, Data Processing	9720	A68061112A	Tele-Video	\$427.00
189757	Reader, Microfiche	DM-100	3720	Datagraphics	\$192.00
189758	Reader/Printer, Microfiche	1500DL	5799	Datagraphics	\$1,653.00
220244	Display Unit	Color 700	Y4K 002302	AMDEX	\$450.00
258141	Mega XT CPU & Keyboard			MEGA	\$337.00
258682	Monitor	5154-001	0107341	IBM	\$579.00
260270	Printer, ADP	P660	580026661	NEC	\$449.00
281838	Monitor	NONE	24571	Sperry	\$450.00
282421	Computer, Micro	5170099	5037693	IBM	\$7,340.00
282781	Computer, Micro	X1	14609655150	IBM	\$1,520.00
404846	Printer, ADP	92P	105250	Okidata	\$510.00
462586	Calculator, Electric, Printer	TI-59	7367096	Texas Instruments	\$229.00
462587	Printer, Digital	PC-100A	3032557	Texas Instruments	\$168.00
549611	Terminal, Data Processing	VS240A	AB1101G36	Digital	\$1,624.00
846244	Terminal, Data processing	5510	250789100373	Micro-Term	\$330.00
846313	Display, Network	NCD-16P1	915 GF008 4TF1	NCD	\$2,720.00
847308	Computer, Mini	1/60	932F1020	Sun	\$2,642.00
847309	Display Unit	HM41195-AAC	930AR0200	Sun	\$8,000.00
849226	Printer, ADP	FX-185	5000624	Epson	\$699.00
849229	Printer, Digital	RX80	330935	Epson	\$425.00
849230	Terminal, Data Processing	4109A	8011088	Tektronix	\$6,326.00
849231	Printer, ADP	556-1	2298890	CDC	\$16,857.00
849235	Terminal, Data Processing	MT420	9479860800108	Micro-Term	\$520.00
849236	Terminal, Data Processing	MT420	9479860800106	Micro-Term	\$520.00
849237	Terminal, Data Processing	MT420	9479860800179	Micro-Term	\$520.00
849239	Terminal, Data Processing	MT420	9479860800101	Micro-Term	\$520.00
849240	Terminal, Data Processing	MT420	9479860800104	Micro-Term	\$520.00
849241	Terminal, Data Processing	4109A	8032800	Tektronix	\$6,326.00
849242	Computer, Micro	XT	NONE	Bytes Unlimited	\$1,830.00
849243	Monitor	190-95282	NONE	Luxor	\$125.00
849244	Computer, Micro	4000	125651	Mega Corporation	\$1,204.00
849246	Printer, ADP	PSJET1	448	QMS	\$4,295.00
849247	Computer, Micro	M5000	F7194RLM5030	Apple	\$4,636.00
849248	Monitor	CPD-1302	5022121	Sony	\$775.00
849249	Printer, ADP	M6000	CA839270	Apple	\$3,219.00
849250	Computer, Mini	HM-4119-S-AA	852AR0262	Sun	\$18,598.00
849251	Computer, Mini	600201601	905F2013	Sun	\$8,950.00
849252	Computer, Mini	GDM-19628	9248DW1131	Sun	\$15,044.00
849253	Terminal, Data processing	5510	2506890101310	Micro-Term	\$432.00
849254	Terminal, Data Processing	5510	2506890100427	Micro-Term	\$432.00
849255	Terminal, Data Processing	5510	2506890101306	Micro-Term	\$432.00
849256	Terminal, Data processing	5510	2506890101307	Micro-Term	\$432.00
1084191	Monitor	JC2002VMA1	SN11C013785	NEC	\$2,219.00
1084194	Display Unit	MultiSync 5D	NONE	NEC	\$2,219.00
1084469	SPARCStation	600-2679-03	104F3192	Sun	\$6,416.00
1084470	SPARCStation	600-2679-03	107F1081	Sun	\$6,416.00
1084471	Display Unit	GDM-1662B	9105C22378	Sun	\$600.00
1084472	Display Unit	GDM-1662B	9105C23414	Sun	\$600.00
1085341	Disk Drive Unit	M2261S	LP910211559HD2	Fujitsu	\$1,500.00
1085815	Display Station, Comp Graph	XP29	8050894	Tektronix	\$4,616.00
1085816	Monitor	119-4071	JPF0550186	Tektronix	\$1,232.00
1087441	Display Unit	JC2002FMA1	160007495	NEC	\$2,295.00
1087442	Printer, Laser	Laser JT III	NONE	HP	\$1,514.00
1087839	Computer, Micro	486	NONE	MYLEX	\$6,109.00
1087840	Computer, Micro	486	NONE	MYLEX	\$6,109.00
1088079	Disk Drive Unit, Optical	MCE165051	HS30252	Storage Dim., Inc	\$3,000.00
1088400	Computer, Micro	NCD 17C	NONE	NCD	\$1,465.00
1088401	Display Unit	17C	NONE	NCD	\$1,465.00
1088530	Printer, ADP	33449A	J104JER945	HP	\$1,500.00
1088628	Display Unit	MultiSync 5D	NONE	NEC	\$2,005.00
1091328	SPARCStation, IPC	600-2575-06	20763033	Sun	\$2,346.00
1091329	Display Unit	GDM-1662B	9138DY0189	Sun	\$3,110.00
1092676	Printer, Laser	PS-410-1	Q0059821	QMS	\$1,489.00
1092677	Printer, Laser	PS-410	NONE	QMS	\$1,489.00
1092679	Printer, Laser	PS-410-1	SNQ0060637	QMS	\$1,489.00
1093233	Display Unit	MultiSync6FG	NONE	NEC	\$2,886.00
1156014	Monitor	CS1572FS	HALL126263	Gateway 2000	\$400.00
1156018	Computer, Micro	Gateway 2000	NONE	Gateway	\$4,599.00
1156061	Computer, Mini	486	TOWER	Gateway 2000	\$4,650.00
1156187	CD ROM Reader	NONE	82704865	NEC Intersect	\$0.00
1156187	Computer, Micro	486DX2/50F	0674603	Gateway 2000	\$4,250.00
1255204	Display Unit	NCD 17C	13408591	Network Computing Devices	\$2,925.00
1256999	Display Unit	HL7965KW-CD	205000568	Mitsubishi	\$1,500.00
1258417	Computer, Micro	CMNR007	0A00690738DF	Silicon Graphics	\$24,703.00

**EXHIBIT D**

**PROCEDURES FOR THE PREPARATION AND APPROVAL OF  
CONTRACTOR REPORTS FOR LANGLEY RESEARCH CENTER**

PROCEDURES FOR THE PREPARATION AND APPROVAL OF CONTRACTOR  
REPORTS FOR LANGLEY RESEARCH CENTER

GUIDELINES. - The following documents or subsequent editions in effect on date of contract shall serve as the basis for preparation of Contractor Reports:

NASA SP-7047 NASA Publications Guide  
DoD 5220.22-M Industrial Security Manual for Safeguarding Classified  
Information, January 1991

NOTE: Copies of NASA SP-7047 will be furnished by the Contracting Officer upon request.

FORMAT AND ORGANIZATION. - The format and organization of a Contractor Report should be consistent and follow the practices recommended in the NASA Publications Guide (NASA SP-7047). For questions concerning format, contact Langley Technical Editing Branch at (804) 864-2518. **An original Report Documentation Page (Standard Form 298) shall be included as the last page in the report.** (The instructions on the back of the form shall not appear in the printed report.) A reproducible copy of this form will be furnished to you with your copy of the executed contract.

TRADEMARKS. - U.S. Government policy prohibits endorsing or criticizing commercial products in its publications. Use of trademarks is discouraged. If a trademark must be used, its owner must be credited and the trademark must be used as an adjective modifying the generic name.

REFERENCES. - Material that is not obtainable or available must not be listed in the references. Documents of NASA contracts published as in-house documents must be referenced as NASA CR's, not as NASA Contract Numbers.

SECURITY. - Security markings, when necessary, shall be consistent with DD Form 254, the directive issued by the Security Classification Officer, and shall conform to requirements established in the DoD Industrial Security Manual. For questions concerning security classification, contact LaRC Security Classification Officer at (804) 864-3415.

APPROVAL COPIES.

1. Upon completion of a report, the Contractor shall submit five (5) approval copies to the Contracting Officer for review and approval by NASA. These copies may be reproduced and assembled by an economical means by the Contractor.

2. The Contractor will be notified of acceptance of the approval copy of the report by the Contracting Officer within sixty (60) days. Approval will be contingent upon changes required by NASA. An original master copy in agreement with the approval copy shall be prepared and submitted by the Contractor.

ORIGINAL MANUSCRIPT. - The original manuscript of a Contractor Report shall consist of a one-sided master copy of the text, cleanly typed on opaque white paper, from which negatives and printing plates can be made, unscreened glossy prints of photographs, and original artwork of a quality suitable for reproduction

by offset printing. Suggestions for preparing acceptable copy are given in NASA SP-7047. The original manuscript should not be bound and should have consecutive page numbers added in proper sequence. Odd numbered pages are numbered at the bottom of the page on the right; even, on the left. To avoid damage in handling and shipping, the original manuscript should be carefully packaged.

**DISTRIBUTION AND DUPLICATION.** - From the review made at the Langley Research Center, the Contracting Officer will make a determination concerning publication and distribution, which the Contractor shall complete within thirty (30) days after receipt of approval copies.

1. If NASA Langley Research Center considers that the report should be distributed only in limited quantities, the Contractor shall be requested to prepare duplicates of the original manuscript and distribute the original manuscript and copies (not to exceed 100<sup>1</sup>) in accordance with a distribution list supplied by the Contracting Officer. In this case, the report will be assigned a number in the NASA CR high-numbered series (CR number above 50,000) by the Contracting Officer. When necessary, the Contractor will be provided with any notices to be added to the cover concerning distribution limitations.

2. If the NASA Langley Research Center considers the report of such quality or interest that it warrants wide distribution, it will be recommended to NASA Headquarters for publication in the NASA CR low-numbered series, and the Contractor will be requested to forward the original manuscript, together with up to 25<sup>2</sup> duplicate copies to Langley Research Center addresses furnished by the Contracting Officer. At the direction of the Contracting Officer, advance distribution by the Center may be made to those having a need to know. Printing from the original manuscript for final distribution will be provided by NASA. NASA will include the CR number on the cover and provide the author(s) with 10 copies each of the final printed report. (Author(s) will not receive 10 copies each of restricted distribution reports.)

**PRINTING STANDARDS.** - To comply with NASA printing requirements and cost considerations, reports submitted should conform to the following standards. Any questions regarding implementation of these standards should be directed to the Langley Printing Management Officer (LPMO) at (804) 864-3284.

1. Multiple-copy production shall be by the offset duplicating method, except as described in subparagraphs 1a and 1b below.

a. Production may be on office copying machines or on diazo equipment when the number of copies is so small that such production is more economical than offset duplicating. However, the images will be clearly legible and permanent.

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<sup>1</sup>See Clause 18-52.208-81, Printing and Duplicating, for more detailed guidance.

b. Any image that cannot be accommodated by a foldout (as described in paragraph 2 herein) will be produced by the diazo or electrostatic method in a size dictated by legibility requirements.

2. The page image size of cover and text pages including headings will not exceed 7 1/8 x 9 1/8 inches. Page image including page number will not exceed 7 1/8 x 10 inches. Diagrams, charts, drawings, etc., shall be reduced and, if necessary, run broadside to eliminate oversized pages. If such reduction is too great for legibility, the subject will be split and run on two facing pages or run as a foldout with an image not larger than 14 x 9 1/2 inches.

3. Text and foldout pages will be on either of two paper stocks:

a. Offset book paper, white, substance 50 lbs. (basis 25 x 38/1000 sheets, Joint Committee on Printing (JCP) A60).

b. Chemical wood writing paper, white or colored, substance 20 lbs. (basis 17 x 22/1000 sheets, JCP G30).

4. Covers, if necessary, will be on either of two paper stocks:

a. Vellum finish (or antique finish) cover paper, white or colored, substance 50 lbs. (basis 20 x 26/1000 sheets, JCP L20).

b. Chemical wood index paper, white or colored, substance 110 lbs. (basis 25 1/2 x 30 1/2/1000 sheets, JCP K20).

5. Use of tabs is expensive and rarely necessary. First consideration should be given to the use of a contents page. Second choice should be bleed- edge index markers. If tabs must be used, they will be duplicated on one side only, on chemical wood index paper, white or colored, substance 110 lbs. (basis 25 1/2 x 30 1/2/1000 sheets); they will be angle cut and not die cut.

6. All duplicating will be in black ink. If other or additional color is required for a functional purpose, approval in writing must be obtained from the Langley Printing Management Officer (LPMO) through the Contracting Officer before preparation of final reproduction copy.

7. Text pages of all documents produced will be reproduced on both sides of sheet where feasible.

8. Binding will be by fastening with wire staples or stitches, either one in a corner or two in the binding margin. Documents too thick to staple or stitch will be produced in two or more volumes. Prong fasteners, binding screws, plastic combs, and spiral and similar wire fasteners add to production time and costs, and generally their use should be avoided.

9. Plastic protective sheets will not be used.

10. When hard-cover protection of a document is needed, the document will be drilled with three round 1/4 inch or 3/8 inch holes, 4 1/4 inches center-to-center, for insertion into standard 3-ring binders. Special stamped, printed or silk-screened binders shall not be used. A single corner staple or stitch or a band will be used to hold the document together until it is put into a binder.



EXHIBIT E  
SUBCONTRACTING PLAN

PART IV - REPRESENTATIONS AND INSTRUCTIONS

SECTION K - REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS

K.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 1992)

#### (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) All offerors are 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 4.903, 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 150 calendar days (60 calendar days unless a different period is inserted by the offeror) 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 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.13 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.14 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.15 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.16 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.17 BUY AMERICAN CERTIFICATE (FAR 52.225-1) (DEC 1989)

The offeror certifies that each end product, except those listed below, is a domestic end product (as defined in the clause entitled "Buy American Act - Supplies"), and that components of unknown origin are considered to have been mined, produced, or manufactured outside the United States.

Excluded End Products	Country of Origin
(List as necessary)	

Offerors may obtain from the Contracting Officer lists of articles, materials, and supplies excepted from the Buy American Act.

## K.18 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.19 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION  
(NATIONAL DEFENSE 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 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.20 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.21 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)  
(SEP 1990)

Any contract awarded as a result of this solicitation will be a ( ) DX rated order; ( X) D0 rated order certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

L.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  
(NOV 1992)

- (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. However, each initial offer should contain the offeror's best terms from a cost or price and technical standpoint.
- (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-fixed-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.

(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.

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 EVALUATION OF COMPENSATION FOR PROFESSIONAL EMPLOYEES  
(FAR 52.222-46) (FEB 1993)

(a) Recompetition 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.

(d) Failure to comply with these provisions may constitute sufficient cause to justify rejection of a proposal.

#### L.17 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.18 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 Head, Services Contracts Branch.

(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.19 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.20 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.21 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.22 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.23 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.24 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.25 PREPROPOSAL/PRE-BID CONFERENCE (NASA 18-52.215-77) (DEC 1988)

- (a) A preproposal/pre-bid conference will be held as indicated below:

Date: Friday, April 29, 1994  
Time: 1:00 p.m. - 4:00 p.m.  
Location: H. J. E. Reid Conference Center

For information in planning your itinerary, the following is a tentative agenda for the conference:

Agenda

- Opening Remarks
- LARC Presentations
- Break
- Facilities Tour LARC
- Questions and Answers

Attendance will be limited to 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 below. 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 Carolyn A. Wells no later than 4:00 p.m., April 27, 1994. 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.26 CERTIFICATE OF PROCUREMENT INTEGRITY - OFFERS (LaRC 52.203-90)  
(OCT 1992)

The certificate required by Federal Acquisition Regulation (FAR) provision 52.203-8, Requirement for Certificate of Procurement Integrity, Alternate I, is attached to this solicitation. 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 prior to award. Do not submit the certificate with your proposal.

L.27 COMMUNICATIONS REGARDING THIS SOLICITATION (LaRC 52.204-95)  
(OCT 1993)

Any communications in reference to this solicitation shall cite the solicitation number and be directed to the following Government representative:

Name: Carolyn A. Wells  
Phone: (804) 864-2529 (COLLECT CALLS NOT ACCEPTED)  
Facsimile: 804-864-7709  
Address: National Aeronautics and Space Administration  
Langley Research Center  
Attn: Carolyn A. Wells, Mail Code 126  
Hampton, VA 23681-0001

Any written communications must include the mail code on the envelope or on the telex.

L.28 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.29 REJECTION, NEGOTIATION, AWARD AND EXPENDITURE OF FUNDS

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.30 IDENTIFICATION OF UNCOMPENSATED OVERTIME

(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 holidays, 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 [ $(\$20.00 \times 40) \text{ divided by } 45 = \$17.78$ ].

(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 effectively 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.31 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.32 CONTRACTOR'S OFF-SITE FACILITY

The Contractor shall provide an off-site facility to house all support contract personnel (Attachment 5), 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.33 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 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.34 INSTALLATION-PROVIDED PROPERTY

The hardware, software and other equipment in the Data Visualization and Animation Laboratory (DVAL), the Numerical Geometry Laboratory (GEOLAB) and the Software Engineering and Ada Laboratory (SEAL) are used jointly by the Contractor and the Government. For a full description of these areas, see Attachment 7, Summary Description of the LaRC Central Scientific Computing Complex.

L.35 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 (2) 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.16 and Subfactor 4 of Factor 1, Page 85)

2. 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, doubled-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 40,000 words is imposed on your mission suitability proposal.

The word-count rules used by any commercial word-processing software package are acceptable. You shall indicate the cumulative word count on each page of your proposal. 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 100. Each "page" is one side of one sheet, 8½" by 11" with at least one-inch margins on all sides. Foldouts count as an equivalent number of 8½" by 11" pages. Type shall be no smaller than 12 points. Text shall be double-spaced (no more than three 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. Any page(s) exceeding the 100 page limitation will not be evaluated.

D. TECHNICAL PROPOSAL - VOLUME 1

FACTOR 1 - MISSION SUITABILITY

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.

1. Subfactor 1 - Organization

This subfactor will be used to evaluate the adequacy and suitability of the proposed organization for performing the work efficiently and effectively. Accordingly, your proposal should include the following:

a. Corporate/company organization chart with supporting narrative, reflecting the contract unit's placement and reporting relationships within the company and the role each will play in contract management and performance.

b. Your contract unit's organization chart with supporting narrative on any subcontractor placement and reporting relationship within the contract unit. Integration of any subcontractor effort with the prime effort should be addressed.

c. You should include your proposed distribution of management and administrative effort and provide rationale therefor.

d. Positions which the Government considers to be "Key" to this effort are so designated in Attachment 6 to this RFP. You should list any other positions which you consider to be "Key" as well as the rationale for so designating each key person.

e. Describe the duties, responsibilities, and authority of your key positions.

f. Identify any work functions which you expect to obtain through subcontracting agreements. Such features as rationale for the arrangement, the qualifications of the subcontractor, nature and extent of the effort, and commitment of subcontractor should be addressed.

g. Describe proposed interfaces among your company, any subcontractors and the Government.

h. Describe any corporate resources or support which will be available under the contract.

2. Subfactor 2 - Phase-In and Initial Staffing Plan

This subfactor will be used to evaluate the effectiveness of your plans for: initial phase-in, minimizing changeover difficulties and maximizing

continuity of services to the Government. Accordingly, your proposal should include the following:

a. Description and schedule of all phase-in activities. NOTE: For purposes of establishing your phase-in milestones, assume Contractor selection September 1, 1994, contract award November 30, 1994, and a contract start date of January 1, 1995.

b. Describe your plans for reaching the required complement of qualified personnel by contract start (January 1, 1995); 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 arrangements, 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 obtaining and making operational any non-personnel resources required for contract performance; (facility, equipment, and materials etc.)

c. 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 5, as well as any other position you deem appropriate. The estimated staffing in Attachment 5 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. Describe your initial orientation plan and training for new employees and/or new assignments.

### 3. Subfactor 3 - Continuing Personnel Management Plan

This subfactor will be used to evaluate the effectiveness of your plans for maintaining (after phase-in) competent staffing during the contract term (including all option periods).

a. Describe the recruitment and employment methods your company will use to staff the contract during the contract term. Additionally, you should identify specific recruitment plans for the following highly skilled, difficult-to-locate Senior Analyst positions:

- High Performance Computing
- Surface Modeling and Grid Generation
- Data Visualization
- Data Management
- Software Engineering
- Mission Software

For each position identified above describe, through the use of position descriptions, hiring vacancy announcements, or sample resumes, the qualifications necessary to perform the function. Also, 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.

b. Describe your programs and policies for accommodating personnel absences, accommodating fluctuating workloads, minimizing turnover, and retaining experienced personnel for the term of the contract, including awards and incentive programs.

c. Describe your training, orientation, and career development plans with regard to new hires, on-board employees, and to meet changing requirements.

4. Subfactor 4 - Professional Compensation Plan

This subfactor will be used to evaluate the suitability of the proposed compensation structure to assure that highly qualified employees are attracted to perform the effort and their continued interest and employment are likely to occur. Accordingly, you should submit the following:

Include a Professional Compensation Plan for the professional employees proposed to perform the Statement of Work to include salaries/wages 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 policies 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.16 of this RFP). Include your compensation plans for all professional positions as defined in 29 CFR 541.

5. Subfactor 5 - Operations Plan

This subfactor will be used to evaluate your understanding of the Statement of Work requirements both from a management and technical standpoint, and your approach for meeting these requirements. Accordingly, your proposal should include the following:

a. Provide your written responses to technical questions set forth in Attachment 8. 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. You should also address your approach for performing the following areas of the SOW, Section C, C.1, General Requirements, Paragraph C.2, Software Design and Development; Paragraph C.3, Configuration Management; Paragraph C.4, Software Modification, Maintenance and Conversion; Paragraph C.8, Consultation and Training; and Paragraph C.9, Systems Administration.

b. Describe your approach to Total Quality Management and continuous improvement.

c. Describe your approach for controlling costs, insuring the Government receives acceptable products and services within the manhours/costs allotted.

d. Describe your approach for assigning, prioritizing, and supervising work and monitoring performance.

e. 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, selection, award, and subcontract management.

6. Subfactor 6 - 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 6, Key Personnel Requirements. Accordingly, your proposal should include the following:

a. A resume for each proposed Key Person. Each resume should detail the individual's education, experience, and other qualifications for the proposed position. These resumes should be clear, complete, and comprehensive. Do not use acronyms in these resumes.

b. Current and proposed salary and a signed statement from each individual as evidence of your ability to employ the individual at the proposed salary and fringe benefits.

c. References for all proposed Key Personnel relative to their current and previous positions. These references should be people outside of your company who are directly knowledgeable of your proposed Key Personnel's training, experience and performance. You should include names, organizations, and current telephone numbers for these references.

d. 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.

E. BUSINESS PROPOSAL - VOLUME II

1. FACTOR 2 - COST (NOT NUMERICALLY SCORED)

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 fully comply with the requirements of Table 15-2, Instructions for Submission of a Contract Pricing Proposal, which begins on Page 2 of the SF 1411. Provide supporting information for each cost element as required by Table 15-2. Your cost proposal as represented by the SF 1411 must be prepared in a manner consistent with your current accounting system and Cost Accounting Standards Disclosure Statement, if applicable.

b. Cost Forms A-C

(1) In addition to SF 1411 requirements, you shall complete and submit Cost Forms A-C as specified below (examples are at Attachment 4) on paper and on personal computer diskettes. The paper submission of Cost Forms A-C may be printed from your completed computerized spreadsheets. 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) Cost Forms A-C shall be completed in accordance with the instructions even though the resulting cost classifications may differ 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.

(3) If a portion of your direct labor hours (DLH) is to be provided by a subcontractor, provide Cost Forms A-C for the effort provided by the prime, by the subcontractor, and for the total effort.

THESE FORMS DO NOT NEGATE THE SUBMITTAL REQUIREMENTS OF PARAGRAPH (a) ABOVE.  
COST FORMS A-C ARE IN ADDITION TO PARAGRAPH (a) REQUIREMENTS.

c. Form Submittal Requirements

	<u>PERIOD</u>	<u>FORMS</u>
Phase-In		SF 1411
Year 1 - Initial		SF 1411
Year 2 - First Option		SF 1411
Year 3 - Second Option		SF 1411
Year 4 - Third Option		SF 1411
Year 5 - Fourth Option		SF 1411
Total Base Effort		B
Options for Additional Level of Effort		SF 1411, C
Total - All Proposed Costs		SF 1411, A

## d. Computerized Cost Proposal Input Instructions

(1) The Government intends to use an IBM-compatible personal computer with 16 MB RAM and LOTUS 1-2-3 for Windows, Release 4 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-C, must be submitted as a Lotus 1-2-3 spreadsheet or any spreadsheet retrievable under LOTUS 1-2-3 for Windows, Release 4, in formats with the identical data that is supplied on all Government and contractor paper forms. In the event of any inconsistency between the diskettes and the paper forms, the paper forms will be considered the intended version.

(2) For your proposal data on Cost Forms A-C to be compatible with our evaluation software DO NOT MOVE CELLS and DO NOT INSERT OR DELETE ROWS OR COLUMNS. However, you may change column widths, formats, fonts, etc. Cost Forms A-C and supporting data must be saved under one file name. It is recommended you request a Government-provided, pre-formatted, high density diskette containing Cost Forms A-C as a LOTUS 1-2-3, Release 4, file. Specify diskette size. Contact Carolyn A. Wells at (804) 864-2529 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. Include on your diskette all rates and formulas used to derive your proposed costs. 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 and your overhead elements might show a formula that, either directly or by referencing other cells, multiplies a rate times the applicable base. Any absolute values must be explained and their values supported.

e. Definitions and/or Cost Information--The following is provided to aid you in preparing your proposal and Cost Forms A-C:

(1) Direct Labor Hours for Government Estimated Staffing (GES)-  
-These are the hours, as defined in Section B, B.5.B of the Contract Schedule, used to provide the Level-of-Effort for the positions set forth in Attachment 5, Government Estimated Staffing. You must propose as base effort the DLH for GES set forth in the following table. Provide details on Cost Form B.

<u>Period</u>	<u>Dates</u>	<u>ST Hrs</u>	<u>OT Hrs</u>	<u>Total</u>
Year 1 - Initial	1/1/95-12/31/95	88,800	1,200	90,000
Year 2 - First Option	1/1/96-12/31/96	88,800	1,200	90,000
Year 3 - Second Option	1/1/97-12/31/97	88,800	1,200	90,000
Year 4 - Third Option	1/1/98-12/31/98	88,800	1,200	90,000
Year 5 - Fourth Option	1/1/99-12/31/99	<u>88,800</u>	<u>1,200</u>	<u>90,000</u>
Total		444,000	6,000	450,000

The total required DLH for GES were derived by estimating a productive manyear of 1,850 and 1,200 hours of overtime (OT) per year. The offeror must propose the Level of Effort set forth above for the base effort and in (2) below for the options for additional LOE. However, two things should be clearly understood. First, the estimated staffing in Attachment 5 is provided for the offeror's information only and is not restrictive for proposal purposes. The offeror should propose the staff that is optimum for contract performance.

Second, since the number of productive manhours per manyear varies among companies, you should propose a staff to meet the Government's level of effort requirements using your productive manhours per year. Do not use the Government's estimated number of manhours per year (1,850) unless it accurately reflects your estimate of your productive manyear for this effort.

(2) Options for Additional LOE Labor Hours--The Government intends to have priced options (H.5) to increase the DLH for GES hours during the contract period as set forth below.

Period	\$1 Hrs
Year 1 - Initial	18,750
Year 2 - First Option	22,500
Year 3 - Second Option	28,125
Year 4 - Third Option	33,750
Year 5 - Fourth Option	37,500
Total	140,625

As the requirement projected is to be equally distributed among the labor categories of Senior Analysis, Computer Scientist, Analyst, and Programmer A, Cost Form C should be completed using the average labor rate (excluding overtime) for these categories in each applicable base period. If the labor rates (and associated costs) used on Cost Form C differ from those proposed for the base effort, supporting rationale for the difference must be provided. Explain the requirement for, or lack thereof, costs associated with (8) and (13) below for additional LOE options. The negotiated cost and fee per manhour for the options will be set forth in Section H of the resultant contract.

### (3) Labor Rates

Provide your rationale for each rate proposed. Any composite hourly rates on the Cost Forms 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 GES labor staff. Address your system for recording overtime.

(5) Overtime Premium--For all proposed overtime, indicate the costs for overtime premium, the base, and the application rate. Enter overtime premium, if proposed, on Cost Forms A-C.

(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.30, 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 for the past three years.

(7) Escalation--You should clearly state the escalation proposed for all cost elements. Discuss the rationale for the proposed escalation including derivation and the company's escalation history for the past three years. If you do not escalate a cost element that is typically escalated, provide your rationale. 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) Labor Costs for Non-Government Estimate Staffing (NGES)--These are the labor costs proposed for positions other than those set forth as Government estimated staffing. Details shall include position titles, number of hours, costs, and labor rates. Applicable payroll additives/taxes and fringe benefits should be shown under those cost categories as described in (9) and (10) below. This category shall include:

(a) Labor that will be costed as direct by your accounting systems but is not "GES" as defined in (e)(1) above. List positions and costs individually.

(b) 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, and worker's compensation) are applicable to all direct labor costs. Written details and spreadsheets shall delineate bases, rates, and calculations and if these factors vary among the years, explain. The elements are to be itemized on a rate chart.

(10) Fringe Benefits--These costs (insurances, retirement costs, savings plans, paid absences, etc.) are applicable to all direct labor costs. Written details and spreadsheets 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 professional compensation plan detailed in your mission suitability proposal. The elements are to be itemized on a rate chart.

NOTE: If it is your normal practice to account for the costs in (8) - (10) 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 be allocated 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. Each major subcontractor, defined as one providing a portion of the direct labor hours or that is at least \$500,000 in total 5-year value, shall complete SF 1411, Cost Forms A-C, and cost details as set forth in paragraphs E.1.a-d above. If a subcontractor considers the cost details company proprietary and will not provide them to the prime, (even in a sealed envelope) these details must be submitted directly to NASA, Langley not later than the date specified for receipt of proposals.

(12) Specified Other Direct Costs (ODC)--This is estimated at \$125,000 annually for PC equipment and related hardware and software (60%), travel (25%), and training (15%) that are required for performance of the Statement of Work (Ref. C.1.). Do not escalate. This estimate does not include any company burden.

(13) 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 ODC on the Cost Forms. This category might include such categories as, subcontract burden, recruiting and relocation costs, and general liability insurance, as well as the categories defined below. If cost for general liability insurance is not an ODC, specify which element includes these cost.

(a) 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. Reference FAR 31.205-11(m).

(b) Buildings and Related Costs--These costs are related to your facility, reference Paragraph L.32, to house 100% of the contract personnel. 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) City/County Business License Tax--You should consult the City of Hampton and other applicable local jurisdictions to determine any business license taxes.

(14) General and Administrative Expense (G&A)--Specify the G&A costs on Cost Forms A-C. Identify on a rate chart 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.

(15) 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-C.

(16) Fixed Fee--You shall enter on Cost Forms A-C the amounts of fees you propose for the contract and provide the rationale for determining the proposed amounts.

(17) Phase-In--If Phase-In costs are proposed, they shall be itemized on Cost Form A. Support shall be provided pursuant to Paragraph L.35.E.1.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, on a contract year basis.

## 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 five years. This plan must comply with the Section I clause entitled, "Small Business and Small Disadvantaged Business Subcontracting Plan."

NOTE: Your proposed subcontracting goal to small disadvantaged business concerns shall include any planned subcontract awards to small disadvantaged business concerns as defined in FAR Clause 52.219-8 and Women-Owned Businesses, Historically Black Colleges and Universities, and other Minority Educational Institutions as defined in NASA FAR Supplement Clause 18-52.219-76.

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.32. Include evidence that you have or will have a suitable facility by contract start date (January 1, 1995) to house the proposed staff, the Government-Furnished Property, and your property. This facility should be in close enough proximity to NASA LaRC to minimize non-productive travel time, to accommodate the daily need for Government/Contractor interface, and to provide for quick response to changing research requirements. You should specify the location, size, general description, and interior layout of the off-site 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.5. Members of the Source Evaluation Committee may inspect the proposed 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.

L.36 SUBMISSION OF SECURITY PLAN FOR UNCLASSIFIED FEDERAL COMPUTER SYSTEMS (NASA 18-52.204-77) (SEP 1993)

(a) "Computer system," as used in this provision, means any equipment or interconnected system or subsystems of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception, of data or information. It includes computers; ancillary equipment; software, firmware, and similar procedures; services, including support services; and related resources as defined by the regulations issued by the Administrator for General Services pursuant to Section 111 of the Federal Property and Administrative Services Act of 1949.

"Federal computer system," as used in this clause, means a computer system operated by a Federal agency or by a contractor of a Federal agency or other organization that processes information using a computer system on behalf of the Federal Government to accomplish a Federal function.

"Sensitive information," as used in this clause, means any information, the loss, misuse, or unauthorized access to, or modification of, which could adversely affect the national interest or the conduct of Federal programs, or the privacy to which individuals are entitled under Section 552a or title 5, United States Code (the Privacy Act), but which has not been specifically authorized under criteria established by an Executive order or an Act of Congress to be kept secret in the interest of national defense or foreign policy.

(b) Under negotiated procurement procedures, the apparently successful offeror shall provide a plan, for Contracting Officer approval prior to award, that describes its program for the protection of sensitive information in unclassified Federal computer systems. The plan shall be submitted no later than 30 days after receipt of the Contracting Officer's written request. Under sealed bidding procedures, failure to provide a security plan with the bid will render the bid nonresponsive.

(c) The plan shall address the security measures and program safeguards which will be provided to ensure that all computer 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 Government 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.

(d) This plan, as approved by the Contracting Officer, will be included in any resulting contract for contractor compliance.

## SECTION M - EVALUATION FACTORS FOR AWARD

### M.1 METHOD OF EVALUATION

A. Proposals received in response to this RFP will be evaluated by a Source Evaluation Committee (SEC) in accordance with procedures similar to those prescribed in the NASA Handbook (NHB) 5103.6B. Mission Suitability will be scored. Cost, Relevant Experience and Past Performance and Other Considerations will be evaluated but not scored. The Source Selection Official, after consultation with the SEC, 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. 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.35, which provides important instructions concerning proposal preparation.

M.2 ALTERNATE METHOD OF SCORING PROPOSALS (NASA 18-52.215-83)  
(NOV 1993)

NASA reserves the right to evaluate proposals received in response to this solicitation under either of the two scoring methods described in NASA FAR Supplement 18-15.613-71(b)(4) and 18-70.303, App. I, Paragraph 407.6.d. Under the standard method, proposals are scored at the completion of initial evaluations and again upon completion of evaluations of Best and Final Offers (BAFOs). Under the alternate method, proposals are scored only after completion of BAFO evaluation.

M.3 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. 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 adequacy and suitability of the proposed organization for performing the work efficiently and effectively. The following items will be evaluated:

a. Corporate/company organization and reporting relationships within the company 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 within the contract unit, and subcontractor effort integration with the prime effort.

c. Distribution of management and administrative effort.

d. Designation of key positions and supporting rationale.

e. Duties, responsibilities, authority of key positions.

f. Proposed subcontracting agreements, including rationale for the arrangement, the qualifications of the subcontractor nature and extent of effort, and commitment of subcontractor to this effort.

g. Proposed interfaces among elements of your company, any subcontractors and the Government.

h. Corporate resources or support proposed for this contract effort.

2. Subfactor 2 - Phase-In and Initial Staffing Plan

Under this subfactor an evaluation will be made regarding the effectiveness of your plans for initial phase-in, minimizing changeover difficulties and maximizing continuity of services to the Government. The following items will be evaluated:

a. Effectiveness of your phase-in schedule including your approach to meeting each milestone.

b. Effectiveness of your plan to fully staff the contract by contract start (January 1, 1995) with qualified personnel, obtain and make operational the non-personnel resources, e.g., facility, materials, and equipment. Rationale for the proposed mix of personnel sources and basis for anticipated incumbent work force retention will be evaluated.

c. The effectiveness and appropriateness of your proposed staffing skill mix, initial orientation and training for new employees and/or new assignments.

3. Subfactor 3 - Continuing Personnel Management Plan

Under this subfactor an evaluation will be made regarding your plans for maintaining competent staffing during the contract term. The following items will be evaluated.

a. 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 the highly skilled and difficult-to-locate positions.

b. Your plans for accommodating personnel absences and accommodating fluctuating workloads. Your programs and policies for minimizing turnover and retaining experienced personnel for the contract term, including awards and incentive programs.

c. Your training, orientation, and career development plans.

4. Subfactor 4 - Professional Compensation Plan

Your proposed Professional Compensation Plan for professional employees will be evaluated regarding the suitability 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.

5. Subfactor 5 - 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 8) and discussion of your approach to the referenced areas of Section C, C.1, Paragraph C.

b. Your approach for Total Quality management and continuous improvement.

- c. Your cost control system.
- d. Your approach for assigning, prioritizing, and supervising work and monitoring performance.
- e. Your purchasing and subcontracting policies and procedures.

6. Subfactor 6 - 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 6, Key Personnel Requirements. 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 initial and priced option periods, and for the options for additional Level-of-Effort will be conducted to determine their validity and the extent to which they reflect performance addressed in the Mission Suitability proposal. An assessment will be made of the offeror's capability to accomplish the contract objectives within the estimated cost proposed. 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 reasonableness of the proposed fixed fee will also be determined in accordance with the guidelines set forth in NASA FAR Supplement 18-15.902. 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--This factor will be used to evaluate experience and past performance to determine the extent to which contract objectives (including technical, schedule and cost) have been achieved on related efforts. 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. 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 adequacy of the facility's size, location, and lay-out to house the necessary personnel and equipment and, to facilitate the efficient accomplishment of the contract effort. The proximity of your proposed site to NASA LaRC and 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.4 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 and Initial Staffing Plan	10%
3. Continuing Personnel Management Plan	15%
4. Total Compensation Plan	15%
5. Operations Plan	25%
6. Qualifications and Availability of Key Personnel	<u>20%</u>
	100%

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.

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 may be considered of less significance than the costs for the five year base effort (including phase-in).

ATTACHMENT 1  
CERTIFICATE OF CURRENT COST OR PRICING DATA

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.

ATTACHMENT 2  
CONTRACT PRICING PROPOSAL COVER SHEET



TABLE 15-2 INSTRUCTIONS FOR SUBMISSION OF A CONTRACT PRICING PROPOSAL\*

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

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.

ATTACHMENT 3  
REQUIREMENT FOR CERTIFICATE OF PROCUREMENT INTEGRITY

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)

Continued on reverse

(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.

ATTACHMENT 4  
COST PROPOSAL FORMS

## DISKETTE INSTRUCTIONS FOR FORMS A-C

### INTRODUCTION

NASA Langley Research Center thanks you for your interest in this procurement. We, like all organizations, are finding ways to improve efficiency. Although your cost proposal must be submitted on a SF 1411 and supported as required by Table 15-2, we now require "selected" cost information (Cost Forms A-C) to be submitted in a NASA designated format. This reduces duplication of effort, minimizes errors, and allows a consistent evaluation of all proposals. Your help in this matter is extremely important. Following the instructions found in Section L.35.E. of the RFP and those below will help insure a timely and fair evaluation.

Submit all Cost Forms A-C, along with supporting rates and factor data, under a single file name. This allows data produced by formulas, referenced cells, etc. to "flow" through the applicable portions of all Cost Forms.

Identify, explain, and reconcile any differences between Cost Form classifications and/or rates and those classifications and/or rates in your established accounting system. This establishes an audit trail from the Cost Forms to DCAA approved rates and factors.

Do not move cells and do not insert or delete rows or columns. This makes your proposal data on the Cost Forms compatible with our evaluation software. However, you may change column widths, formats, fonts, etc.

Provide two copies of your diskette(s) to allow evaluation in the event one is damaged.

Your diskettes shall be true self-calculating, i.e., including all rates, factors, and formulas used to derive your costs. If possible, do not use absolute values; however, if absolute values are used they must be explained and their values supported. This allows for verification of formulas and lets changes "flow" through the Cost Forms.

**END**

**BEFORE YOU SUBMIT THIS COST PROPOSAL**, be sure you have complied with the instruction provided in Section L.35.E. of the RFP and in this diskette.

Are all Cost Forms and supporting data under a single file name?  
Are the cell contents showing formulas rather than absolute values?  
Have all categories and elements been addressed?

FORM A SUMMARY OF TOTAL PROGRAM PROPOSED COSTS				
PROPOSER: _____				
RFP 1-122-1150.3059	TOTAL EFFORT	PHASE-IN	BASE EFFORT	ADDITIONAL LOE
DESCRIPTION	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS
<b>DIRECT LABOR (GES) HOURS:</b>				
Senior Analyst				
Computer Scientist				
Analyst				
Programer A				
Programer B				
Programming Aide				
Total Hours				
<b>HOURLY RATES:</b>				
Senior Analyst				
Computer Scientist				
Analyst				
Programer A				
Programer B				
Programming Aide				
<b>DIRECT LABOR (GES) COSTS</b>				
<b>OVERTIME PREMIUMS</b>				
<b>OVERHEAD: *</b>				
Labor Costs - Non-GES				
Payroll Additives/Taxes				
Fringe Benefits				
Other (Itemize in discussion)				
Total Overhead				
<b>OTHER DIRECT COSTS:</b>				
Specified				
Company Specific: (Itemize below) **				
Total ODC				
G&A *				
FCCOM *				
TOTAL COST				
FIXED FEE *				
CPFF				
TOTAL COST PER DIRECT GES HOUR				
FEE PER DIRECT GES HOUR				
CPFF PER DIRECT GES HOUR				

\* Provide a chart of rates and details to support the costs proposed  
 \*\* Use a separate sheet if additional lines are required

**FORM B  
BASE EFFORT PROPOSED COSTS**

PROPOSER: \_\_\_\_\_

RFP 1-122-1150.3059	NO. POS.	TOTAL BASE EFFORT	INITIAL PERIOD	FIRST OPTION	SECOND OPTION	THIRD OPTION	FOURTH OPTION
DESCRIPTION		HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS
<b>DIRECT LABOR (GES) HOURS:</b>							
Senior Analyst							
Computer Scientist							
Analyst							
Programer A							
Programer B							
Programming Aide							
Total Hours							
<b>HOURLY RATES:</b>							
Senior Analyst							
Computer Scientist							
Analyst							
Programer A							
Programer B							
Programming Aide							
<b>DIRECT LABOR (GES) COSTS</b>							
<b>OVERTIME PREMIUMS</b>							
<b>OVERHEAD: *</b>							
Labor Costs - Non-GES							
Payroll Additives/Taxes							
Fringe Benefits							
Other (Itemize in discussion)							
Total Overhead							
<b>OTHER DIRECT COSTS:</b>							
Specified							
Company Specific: (Itemize below)**							
Total ODC							
G&A *							
FCCOM *							
TOTAL COST							
FIXED FEE *							
CPFF							
TOTAL COST PER DIRECT GES HOUR							
FEE PER DIRECT GES HOUR							
CPFF PER DIRECT GES HOUR							

\* Provide a chart of rates and details to support the costs proposed  
 \*\* Use a separate sheet if additional lines are required

**FORM C**  
**ADDITIONAL LEVEL OF EFFORT PROPOSED COSTS**

PROPOSER: \_\_\_\_\_

RFP 1-122-1150.3059

	TOTAL ADD'L LOE	INITIAL PERIOD	FIRST OPTION	SECOND OPTION	THIRD OPTION	FOURTH OPTION
DESCRIPTION	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS
DIRECT LABOR (GES) HOURS						
COMPOSITE HOURLY RATES:						
DIRECT LABOR (GES) COSTS						
OVERTIME PREMIUMS						
OVERHEAD: *						
Labor Costs - Non-GES						
Payroll Additives/Taxes						
Fringe Benefits						
Other (Itemize in discussion)						
Total Overhead						
OTHER DIRECT COSTS:						
Specified	N/A	N/A	N/A	N/A	N/A	N/A
Company Specific: (Itemize below) **						
Total ODC						
G&A *						
FCCOM *						
TOTAL COST						
FIXED FEE *						
CPFF						
TOTAL COST PER DIRECT GES HOUR						
FEE PER DIRECT GES HOUR						
CPFF PER DIRECT GES HOUR						

\* Provide a chart of rates and details to support the costs proposed  
 \*\* Use a separate sheet if additional lines are required

ATTACHMENT 5

GOVERNMENT ESTIMATED STAFFING REQUIREMENTS AND MINIMUM POSITION QUALIFICATIONS

## Attachment 5

**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.

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 6.

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 Governments' estimated staffing. These areas of expertise relate to the work requirements described in the Statement of Work.

## Government Estimated Skill Mix

<u>Position</u>	<u>Number of Positions</u>	<u>Number of SECRET Clearances</u>	<u>Area of Expertise</u>
Senior Analyst	1	0	Mission Software*
	1	0	Surface Modeling & Grid Generation*
	1	0	High Performance Computing
	1	0	Data Visualization
	1	0	Data Management
	1	0	Software Engineering
Computer Scientist	3	0	Software Engr./Mission Software
	2	0	Surface Modeling/Grid Generation
	1	0	High Performance Computing
	2	0	Data Visualization
	2	1	Data Management
Analyst	4	0	Software Engr./Mission Software
	2	0	Surface Modeling/Grid Generation
	2	0	High Performance Computing
	4	0	Data Visualization
	2	0	Data Management
Programmer A	4	0	Software Engr./Mission Software
	1	0	Surface Modeling/Grid Generation
	1	0	High Performance Computing
	3	0	Data Visualization
	2	0	Data Management
Programmer B	1	0	Software Engr./Mission Software
	1	0	Surface Modeling/Grid Generation
	1	0	High Performance Computing
	1	0	Data Visualization
	1	0	Data Management
Programming Aide	1	0	Software Engr./Mission Software
	1	0	Data Visualization
<b>Total</b>	<b>48</b>	<b>1</b>	

\*Key Personnel Requirements are described in Attachment 6.

## GOVERNMENT ESTIMATED STAFFING SUMMARY

<u>Job Title</u>	<u>Positions</u>
1. Senior Analyst	6
2. Computer Scientist	10
3. Analyst	14
4. Programmer A	11
5. Programmer B	5
6. Programming Aide	<u>2</u>
Total	48

## GENERAL POSITION DESCRIPTIONS

**JOB TITLE:** Senior Analyst (High Performance Computing)

**ESTIMATED EFFORT:** One (1) Position

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in the development of scientific applications for high performance computing systems, with at least two years experience on highly parallel or distributed parallel systems. Should have experience in the analysis, debugging, optimization and performance monitoring for large scientific applications.

**JOB TITLE:** Senior Analyst (Data Visualization)

**ESTIMATED EFFORT:** One (1) Position

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in the design, development, and utilization of data visualization software on high speed graphics workstations. Should have good working knowledge of the application of graphics, animation, image processing, and multimedia tools and techniques to scientific problems.

**JOB TITLE:** Senior Analyst (Data Management)

**ESTIMATED EFFORT:** One (1) Position

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in designing, implementing and documenting data base applications using a commercially available data base management system (DBMS). Should have experience in defining user data requirements, designing and implementing graphical user interfaces to the data base application and using the Standard Query Language (SQL). Should have experience with distributed data management.

**JOB TITLE:** Senior Analyst (Software Engineering)

**ESTIMATED EFFORT:** One (1) Position

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Computer Science, Computer Engineering, Electrical Engineering, or a related field. A Master of Science Degree is preferred. Courses in software engineering or equivalent experience is also required.

Should have eight (8) years experience in software development and at least two years of experience in managing the development of real-time, embedded software systems. Should possess a strong software engineering background which includes experience with all phases of the software development life cycle such as cost estimation, requirements, design, implementation, testing, and maintenance. Should also be experienced with software process elements such as evolutionary spiral models, waterfall models, incremental builds, prototyping, object-oriented principles, the Ada programming language, metrics collection and analysis, verification and validation, quality assurance, CASE tools, and configuration management.

**JOB TITLE:** Computer Scientist

**ESTIMATED EFFORT:** Ten (10) Positions

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in the development of large-scale applications or operating systems software. Should have experience in interpreting programming problems in terms of system software interface and hardware characteristics. Should have two (2) years of experience in the area of expertise for which proposed.

**JOB TITLE:** Analyst

**ESTIMATED EFFORT:** Fourteen (14) Positions

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have five (5) years experience in the development of scientific computer programs to solve aerospace problems. Work will be conducted on large-scale computer systems, real-time flight computers, and specialized workstations. Should have one year of experience for the area of expertise for which they are proposed.

**JOB TITLE:** Programmer A

**ESTIMATED EFFORT:** Eleven (11) Positions

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have three (3) years experience in the development of scientific applications programs.

**JOB TITLE:** Programmer B

**ESTIMATED EFFORT:** Five (5) Positions

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have one (1) year experience in the development of scientific applications programs.

JOB TITLE: Programing Aide

ESTIMATED EFFORT: Two (2) Positions

QUALIFICATIONS: Should have a high school diploma or equivalent.

Should have a working knowledge of college algebra, trigonometry, and FORTRAN. Word processing and technical documentation experience is desirable.

Should have one (1) year experience in computer programing.

ATTACHMENT 6  
KEY PERSONNEL REQUIREMENTS

**Attachment 6****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 the following:

- (a) Contract Manager (and Deputy Manager, if proposed)
- (b) Senior Analyst (Mission Software)
- (c) Senior Analyst (Surface Modeling/Grid Generation)
- (d) Other (if proposed)

The number and designation of key positions is dependent on your organizational structure. 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 Contract Manager if proposed)

**DUTIES:** Manages the basic contract work in accordance with the terms of the contract and serves as primary point of contact with appropriate Government personnel on technical and administrative matters. Responsible for selection, promotion, awards, training, separation, disciplinary actions, and day to day operation and management of the contract. Responsible for general work assignments, staff utilization, productivity and compliance with terms of contract or work orders. Responsible for generating and submitting reports in accordance with terms of the contract.

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Computer Science, Mathematics, Physical Sciences, or a related field.

Should have ten (10) years progressive experience in scientific digital computer applications on large scale digital and flight computers, including five (5) years of management experience in efforts of similar size and scope.

**TITLE:** Senior Analyst (Mission Software)

**DUTIES:** Acts as principal technical contact between the Government and the Contractor for work orders involving mission software for LaRC aerospace flight experiments. Receives general requirements for mission software and subdivides work into functional elements such as real-time, embedded instrument control software and ground support software. Participates, as mission software representative, in technical meetings for planning and implementing flight experiments. Provides technical direction and coordinates total development of software systems. Plans and coordinates contract personnel involvement in onboard flight experiments and mission operations.

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Computer Science, Mathematics, Physical Sciences, or a related field.

Should have eight (8) years experience in the total system design, development, testing, and integration of real-time, embedded instrument control software and associated ground support software. Should possess a strong working knowledge of software development environments, embedded system tools, and modern software engineering practices.

**TITLE:** Senior Analyst (Surface Modeling and Grid Generation)

**DUTIES:** Acts as principal contact between the Government and the Contractor for work orders involving grid generation and geometric modeling. Provides technical direction and coordinates Contractor's effort in supporting GEOLAB and tasks in this work area. Participates, as Contractor's representative, in technical meetings for planning and coordinating GEOLAB, surface modeling and grid generation activities in support of specific work orders.

**QUALIFICATIONS:** Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in grid generation techniques including structured and unstructured methods to produce three dimensional grids suitable for Computational Fluid Dynamics (CFD) and Computational Structural Mechanics (CSM) analyses. Should possess a good working knowledge of state-of-the-art computer aided design software, surface modeling techniques, data exchange standards for geometry and grids, standard CFD and CSM analysis software as applied to the design of aerospace vehicles, multi-disciplinary optimization techniques, and digital scanner technology and software, as well as grid generation techniques based upon algebraic/elliptic multi-block structured methods and unstructured advancing front methods.

ATTACHMENT 7

SUMMARY DESCRIPTION OF THE LARC CENTRAL SCIENTIFIC COMPUTING COMPLEX

## THE LaRC CENTRAL SCIENTIFIC COMPUTING COMPLEX

The LaRC Central Scientific Computing Complex (CSCC) consists of a number of computers, electronic file storage devices, input/output devices, and associated equipment located in Buildings 1268, 1268A, and 1268B, at the intersection of Langley Boulevard and West Taylor Road. This hardware is accessed and interconnected through several communication networks and functions under the control of extensive software. There are a number of user areas for specific applications.

The CSCC is managed and operated by the Information Systems Division (ISD) of the Center's Internal Operations Group (IOG).

The principal services provided by the complex are:

- Large-scale computing (for such applications as computational fluid dynamics).
- Data storage and retrieval.
- Electronic communication within the Center and off site.
- Scientific visualization, animation, and image processing.
- Geometric modeling and grid generation.
- Flight-critical software development
- Real-Time flight simulation involving pilots and/or flight hardware.

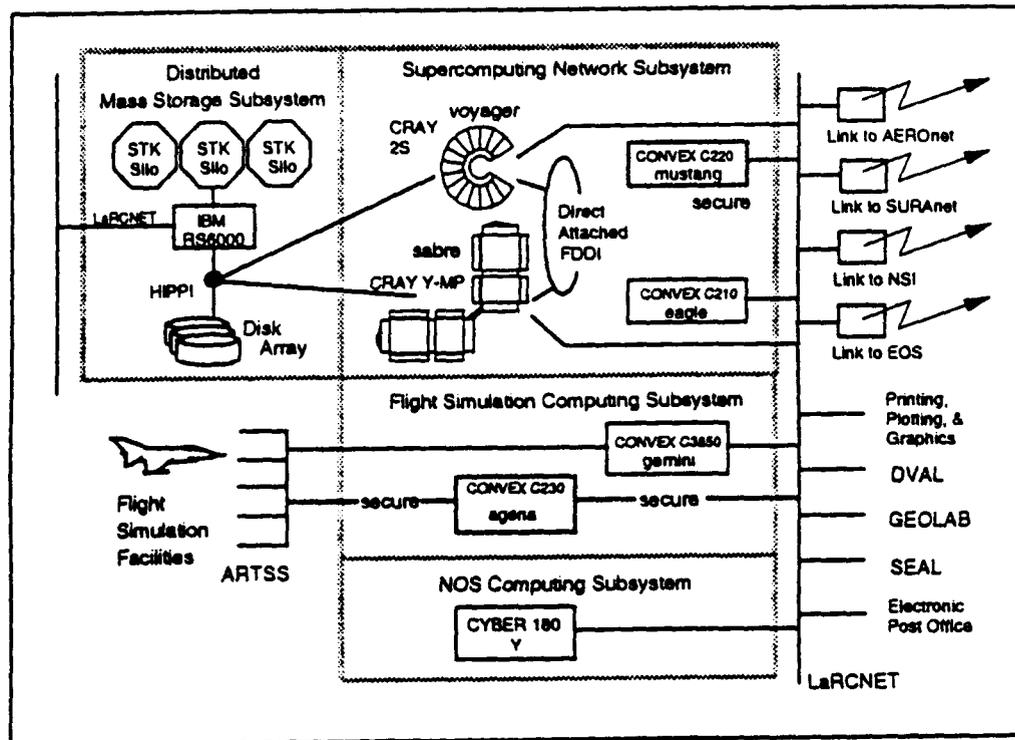


Figure 1. The Central Scientific Computing Complex

The Complex is divided into subsystems according to function. The "core" subsystems are outlined in Figure 1. They are the Supercomputing Network Subsystem (SNS), the NOS Computing Subsystem (NCS), the Distributed Mass Storage Subsystem (DMSS), and the Flight Simulation Computing Subsystem (FSCS).

02/23/94

Electronic communication between the various components of the complex is provided by networks. The backbone of the SNS is a Direct Attached FDDI Network. Access to mass storage by the supercomputers is provided via a High Performance Parallel Interface (HIPPI) switch. A centerwide network, called LaRCNET, provides access to the core subsystems, to special purpose facilities in the complex, to distributed computing facilities throughout the Center, and to outside networks. An electronic Post Office for on-site and off-site e-mail is provided for all LaRC personnel and contractors who have access to a computer, workstation, or terminal. Data phone access is available through the centerwide LaTS (telecommunications) terminal access system.

The CSCC includes three application laboratories containing work stations and specialized hardware/software facilities that are available to the researcher for specific purposes. These are the Data Visualization and Animation Laboratory (DVAL), Numerical Geometry Laboratory (GEOLAB), and Software Engineering and Ada Laboratory (SEAL). They are managed by ISD personnel who also provide assistance and consultation in their use.

A major application of the CSCC is flight simulation. This is implemented through the use of high-speed computers to drive flight systems and displays in the simulation of the flight of aircraft-or spacecraft in real time. The FSCS, a Computer Generated Image (CGI) system, control consoles, and facilities for specific simulation purposes are interconnected in appropriate configurations via the Advanced Real Time Simulation System (ARTSS) network.

The Operations Control Office (OCO), located in Room 1047 of Building 1268, 15 Langley Boulevard, is the focal point for day-to-day operations. It is open from 7:15 a.m. to midnight except on weekends and holidays. It coordinates the distribution of hard-copy documentation, electronic notes and bulletins, and printed/graphics output that is produced in the complex. It handles requests for priority or secure processing and special processing such as that involving magnetic tape.

The complex as a whole is operational at all times; however, various subsystems may be off-line from time to time for maintenance or upgrade. Scheduled shutdowns are announced through bulletins and electronic notices. Offices and user areas are accessible to NASA employees and contract personnel during prime shift; however, arrangements must be made in advance for access at any other time. Access to most core equipment areas is restricted to systems and maintenance personnel.

### **The Supercomputing Network Subsystem**

The powerful mainframe computers required for such large-scale applications as the computation of flow fields around aerospace vehicles or the deflections and stresses in complex structures, are contained in the Supercomputing Network Subsystem (SNS).

The SNS contains a CRAY 2S with 4 processors and 128 million (64 bit) words of shared memory (**Voyager**); a CRAY Y-MP with eight processors, 256 million words shared memory, and a 512 million word solid-state storage device (**Sabre**); a CONVEX C210 with 1 processor and 256 million (8 bit) bytes of memory (**Eagle**); and a CONVEX C220 with 2 processors and 512 million bytes of central memory (**Mustang**). Each of these computers have some dedicated disk storage and the Cray computers are connected to a mass storage system via a HIPPI switch. All SNS computers are connected to a Fibre Distributed Data Interface (FDDI) ring network operating at 100 million bits per second (Direct Attached FDDI Network). Several high performance workstations are directly attached to this network and it is accessible via a network "bridge" from the centerwide LaRCNET.

From an application programmer's point of view the computers in the SNS are similar. **Voyager**, **Sabre**, **Eagle**, and **Mustang** use versions of UNIX as an operating system and have FORTRAN compilers that produce vectorized code. The major differences are speed, memory capacity, and the ability to multitask on

**Voyager and Sabre.** Sabre is rated at about 2.5 GFLOPS (billion floating-point operations per second) and Voyager is rated at one GFLOPS. C compilers are provided. Mathematical libraries include IMSL, LIBSCI (Cray optimized), BCSLIB and BCSLIB-EXT (from Boeing Computer Services), and LARCLIB. Graphics packages include Precision Visuals Graphics software (DI-3000, etc.), the NCAR package, RM/RMT (Raster Metafile), RASLIB, PLOT3D, and interface to GAS (which runs on a workstation).

### **Access to the National Aerodynamic Simulator Facility**

In addition to the SNS computers, Langley researchers have access to the National Aerodynamic Simulator (NAS) facility at the Ames Research Center, Mountain View, California. The primary resource is a 16 processor CRAY C-90 (VonNeumann) that has a billion words of central memory. It also has a 1024 Mwd. SSD. Each C-90 processor is rated at 2.2 times a CRAY Y-MP processor.

A user is allocated time on NAS through the submittal and approval of a project proposal. There is normally a call in November for proposals for the next NAS Operational Year which begins in March. The LaRC NAS Steering Committee, under the direction of the Chief Scientist, evaluates the proposals and distributes LaRC's allotted hours to the approved projects.

### **The NOS Computing Subsystem**

The NOS Computing Subsystem (NCS) consists of a single Control Data CYBER 180/860 class computer, designated by the alphabetic letter Y. This subsystem is what remains of the primary complex of scientific computers at LaRC from the mid 1960's through the mid 1980's. The NOS computing subsystem is being maintained to service those applications that were developed to run on the Control Data computers and which have not yet been transitioned to the SNS subsystem. There are no plans to upgrade the NOS subsystem and it is anticipated that it will be retired by the end of 1994.

### **The HPCC Program**

The High Performance Computing and Communications (HPCC) Program is a national initiative for keeping the United States competitive in supercomputer technology. Through negotiations with NASA Headquarters Office of Aeronautics, Exploration, and Technology, the LaRC is designated as a site for a computational testbed for experimenting with Computational Aerosciences (CAS) problems on a massively parallel computer. In March 1993, LaRC took delivery of an Intel Corporation Paragon computer with 72 computational nodes, each with a 75 MFLOP peak rate and 32 MBytes of local memory. The total system has a capacity of 5.5 GFLOPS peak computational rate and 2 GBytes of memory. It has 38 GBytes of disk storage, 2 each of HIPPI, FDDI, and ethernet controllers, and runs the OSF/1 UNIX operating system on each node.

In the initial stages at least, ISD and a relatively few LaRC researchers will be working to understand how to use the Paragon. It is not to be a "production" computer, and thus should not be considered to be part of the CSCC; however, eventually it or its successors may achieve that status. Access to the Paragon is available on a limited basis.

### **Mass Storage**

Scientific computer applications frequently generate large data files (such as flow field descriptions) that can be held in local storage for only a short period, or not at all. To hold data sets from all over the center for relatively long periods in the most economical way, large, centrally located, "mass" storage devices have been installed in the CSCC. These devices are supported by file servers, disk arrays, and high speed

communications networks. Together they are referred to as the Distributed Mass Storage Subsystem (DMSS).

The primary components of the DMSS are two IBM 9570 disk arrays (each having a capacity of 40 GBytes), an IBM RS6000 Model 970 workstation, an IBM RS6000 Model 560 workstation, and a Storage Technology Corporation (STK) ACS (Automatic Cartridge System) 4400 Tape Library capable of holding 7.2 trillion bytes of information. The two workstations function as primary and back-up file servers, the disk arrays provide rapid access storage, and the tape library provides large capacity archival storage. Data transfer between the file servers and disk arrays, and to and from the two supercomputers, *Voyager* and *Sabre*, is carried by High Performance Parallel Interface (HIPPI) channels. A Network Systems Corporation (NSC) PS32 HIPPI switch makes the appropriate connections for requested file transfers. The tape library is connected to the file servers via block mux interfaces. Data transfer to and from distributed computers and workstations is accomplished via FDDI or ethernet connections to LaRCNET.

The DMSS is a file based system that uses the UNIX directory structure. An extension to the usual UNIX commands is used to access and manipulate files in the DMSS. These are referred to as Explicit Archival and Retrieval System (EARS) commands and include, as examples, *masput*, *masget*, *masdir*, *masmkdir*, *masmv*, and *maschmod*. They perform the same function as the UNIX command that follows the *mas*, except with respect to the mass storage system instead of the computer's local file space.

## Networks

Within any computing environment a critical requirement is for electronic communication between computers, storage devices, workstations, and other equipment. This communication takes the form of the transfer of files which may be as small as a brief command or message, or as large as all the data required for a flow field definition about an aircraft. The network architecture at LaRC is illustrated in Figure 2.

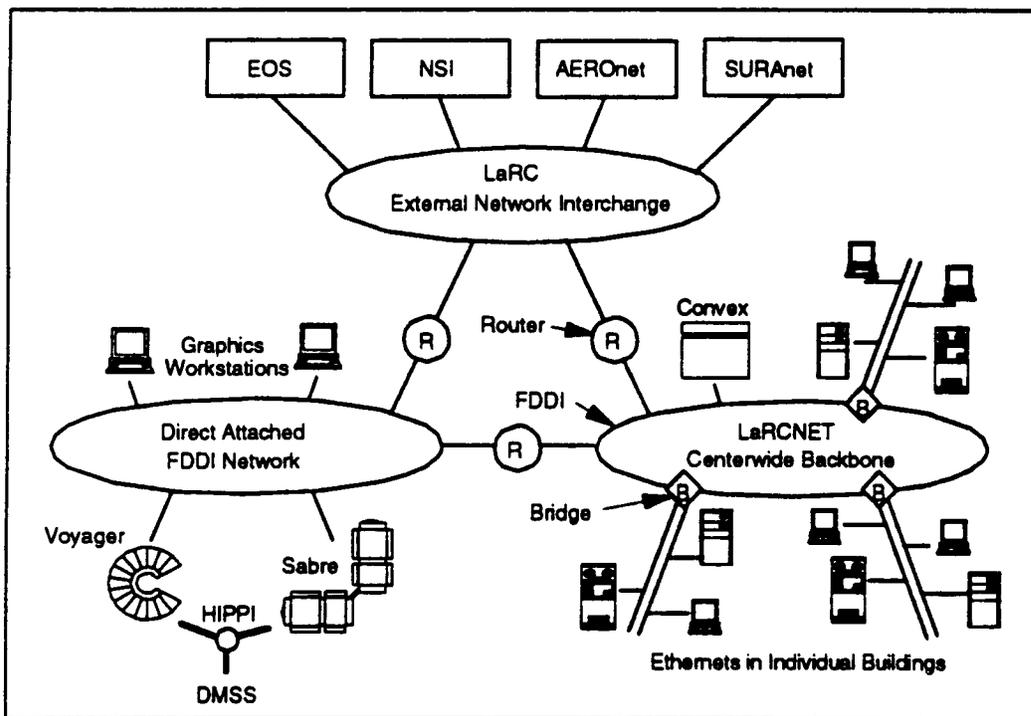


Figure 2. LaRC Computing Network Architecture

As discussed above, the supercomputers access each other and mass storage devices via the High Performance Parallel Interface (HIPPI) network. This network has a star topology with a HIPPI switch at the center of the star. As the name implies, HIPPI is a multi-channel cable that carries 64 bits in parallel, one bit per channel. It operates at the rate of 800 Mbps; however, it is limited in range and requires special interfaces to the supercomputers and other devices.

LaRCNET is the name given to the Local Area Network (LAN) which enables communication among computers distributed throughout the Langley Research Center campus. It consists of a combination of Fiber Distributed Data Interface (FDDI) "ring" and Ethernet "bus" networks and uses standard packet switching protocols to permit multiple simultaneous transmissions to share common communication paths.

There are three FDDI "rings" currently in operation. One of them, The Direct Attached FDDI Network, shown to the left of Figure 2, connects high performance graphic and image processing workstations directly to the supercomputers, thereby permitting the transfer of datasets between workstations and supercomputers at the 100 Mbps rate. A second FDDI ring, shown at the top, center of Figure 2, takes care of the interface between LaRCNET and outside networks. Finally, an FDDI ring, shown to the right of Figure 2, forms the backbone of a centerwide collection of local Ethernets. The nodes on this ring are bridges (no more than one per building) that each interface to one or more ethernet segments serving distributed mainframes, workstations, personal computers, and other devices. Over 90 buildings are serviced in this manner.

The FDDI ring, depicted at the top center of Figure 2, provides electronic communication to external networks. Currently there are four external networks that are accessed via routers and dedicated telephone lines: Four T1 lines connect to the NAS facility (AEROnet) at the Ames Research Center, Moffet Field, CA; A single T1 line connects to the National Science Internet (NSI) network, providing access to the institutional computers at the Ames Research Center and also to NSI/DECNET; A single T1 line is used to connect to a node on the Southeastern Universities Research Association Network (SURANET) located in Norfolk, VA; and a dedicated 168 Kbs telephone circuit is used to connect to the Earth Observing System (EOS) Data and Information Service Version () network.

The primary file passing protocol implemented on LaRCNET is the standard Transmission Control Protocol/Internet Protocol (TCP/IP). The domain name for LaRC is larc.nasa.gov.

### **The LaTS Terminal Access System**

This refers to the data communications subsystem of the centerwide IBM/ROLM telecommunications system, a 9751 CBX which provides for both voice and data communications. Connection is possible via office telephone sets to many computers on the field, including most of the computers of the CSCC. Access to LaRC computers from off-site terminals and personal computers equipped with a modem is possible through an 800 telephone line.

### **High Speed Printing and Plotting**

An IBM laser printer is used for printed output and "working" plots. It has a printing speed of 134 pages per minute and a plotting resolution of 240 x 240 dots per square inch. It uses fanfold paper that has an addressable printing and plotting area of 13.88" x 7.5". An IBM 9370 computer is used as the controller. Output files generated by any computer LaRCNET can be routed to the printers for hard-copy output which is placed in an output bin, located in the OCO, or delivered to the user's work site.

## **Production Graphics**

Several computer graphics software packages are available through the CSCC. These packages support various graphics applications including: 2-D and 3-D modeling, graph and chart generation, contour and surface rendering, mapping, and animation. They also conform to several of the current and proposed ANSI graphics software standards such as CORE, GKS, and X Window System.

Production graphics devices are located in the I/O area, Room 1051, Bldg. 1268, 15 Langley Boulevard. They include pen plotters, an electrostatic plotter, a thermal plotter, laser printers, and film recorders. Each device accepts input data in the form of a graphics metafile through an appropriate driver program. Users execute commands that transfer their data to a particular device. Hardcopy output is delivered to the user through the delivery service in the same manner as printed output.

An automatic film processing system is installed in the Film Recording Laboratory for developing film from central site film processors. The turnaround for developed film is three days.

## **Secure Processing**

Occasionally Langley becomes involved in projects that require computations that must be classified under national security regulations. In order to accommodate these situations, one of the SNS computers (the CONVEX-210, **Mustang**) is located in a secure area in the building 1268B and can be isolated from the rest of the complex. In order to use this computer in secure mode, the researcher must contact the OCO to arrange a schedule.

Because neither LaRCNET nor LaTS are protected for classified information, the researcher must come to building 1268 and use a designated terminal in the secure area. When possible, secure processing is deferred to a non-prime shift.

## **The Data Visualization and Animation Laboratory (DVAL)**

The Data Visualization and Animation Laboratory (DVAL), Room 1101A, Bldg. 1268A, 24 West Taylor Road, provides advanced visualization tools on an integrated system of high-performance graphics workstations, digital image processing equipment, and a digital video editing system. An experienced team of visualization specialists is available to help researchers import, visualize, and interpret data derived from a wide variety of sources including in-flight experiments, wind tunnel tests, computer simulations, and atmospheric studies. Video reports can be created as a means for analyzing and presenting dynamic scientific results. Hardcopy output of image data in the form of prints and viewgraphs is also available.

DVAL contains five SUN Workstations, four Silicon Graphics IRIS Workstations, two NCD X-terminals, a Gateway 486/DX PC Compatible, and a Macintosh Quadra 800, that are configured with various high resolution monitors and disk drives. Several of the workstations are connected directly to the Direct Attached FDDI (100Mbyte/sec FDDI ring) in order to obtain high bandwidth access to the SNS supercomputers. The other devices have normal access to LaRCNET through an ethernet connection.

Image input and output devices include two color film recorders (Focus & Matrix), a Sharp color flatbed scanner, an Eikonix digitizing camera, a Tektronix color network printer, a Sony video printer, and a Barco large screen projection TV.

A facility, referred to as the Scientific Visualization System (SVS), is available in DVAL to create video tapes from computer graphics generated on the SNS computers or high performance graphic workstations and to edit video tapes from a variety of sources. It can be used to produce video reports of time dependent theoretical and experimental data. The system consists of a DF/X Compositum video editor which controls

both digital and analog video machines. The digital video machines include two SONY D1 tape recorders and two Abekas real-time disk drives. Because these machines are digital video they preserve the integrity of the original image regardless of the number of editing generations, so they are used as the primary editing sources and destinations. Also the Abekas drives are connected to LaRCNET so that digital images can be transferred to the SVS from computers or workstations on the network. The analog machines include WORM laser disk recorders and numerous tape recorders (Betacam SP, S-VHS, and Umatic). These 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 converter so that it can be shipped to the researcher's site and connected to a workstation/PC for local recording. Finally an audio system and a recording booth have been incorporated into the system to support narrations and background music.

Documentation on numerous graphics, symbolic mathematics, and Computer-aided design packages is available in DVAL; and staff are available to assist the researcher in the use of all DVAL facilities.

### **The Numerical Geometry Laboratory (GEOLAB)**

Large-scale computations at the Langley Research Center are generally for the purpose of simulating and analyzing fluid flow, plasma dynamics, or continuum mechanics phenomena. The governing laws and corresponding equations of motion are well known and apply equally to all problems of a given class; however, the boundary data and geometric aspects such as the configuration of boundary surfaces account for the great variety and complexity of solutions which is typical of these problems.

The Numerical Geometry Laboratory (GEOLAB) is located in room 2119 of building 1268A, 24 West Taylor Road. It is a centralized, open-shop, hands-on facility for use by the research community in defining the boundary surfaces and generating grids in preparation for the solution of CFD and similar problems. Currently there are nine Silicon Graphics high-performance graphics workstations and four X-terminals in GEOLAB. Four of the workstations are the new 150 MHz ONYX series with two CPUs and 128MB of memory. Three of the ONYX workstations have VTX graphics and one has the Reality Engine2 Graphics. Also, there is a 4D-440/VGX and a CRIMSON/VGX, both with 128MB of memory; two INDIGO R4400/Elan 150MHz workstations with 128MB of memory; and a Personal Iris 35/Elan with 64MB of memory. There is a Cyberware 3D Laser Digitizer which has been used to scan wind tunnel models like the X-15, F-22, and Waverider.

Software available in GEOLAB is divided into four categories: surface definition, grid generation, flow field solution, and CFD visualization. Supported packages include ICEM-DDN and Scaffold for surface definition; GRIDGEN, ICEMCFD, AZ2000, VOLUME, Gridtool, and CONVERT for grid generation; VGRID/USM3D, TINS3DMB, and CH3D for flow field solution; and SURFACE, FAST, FIELDVIEW, and TECPLOT for CFD visualization.

Members of the GEOLAB staff will assist in planning grid generation strategy and help the new user to use the available hardware and software.

### **The Software Engineering and Ada Laboratory (SEAL)**

The Software Engineering and Ada Laboratory (SEAL), located in room 1121, Building 1268A, is best described as a total environment for the rapid development of highly-reliable, cost-effective, embedded flight and ground software for LaRC flight projects. Software is followed through its entire life cycle from concept, development, integration, testing in a simulated flight environment, and maintenance.

A Sun Sparc Server 690 MP and a NT Advanced (486 PC) Server provide access to common files and software tools. These machines are tied to a local area network to which are connected two Sun

workstations, a Vax Station 4100 (with DECNet access) and a number of 486 PCs operating in the Windows NT environment. The LAN is, in turn connected to LaRCNET, providing access to the DMSS and other workstations and flight hardware setups located throughout the center. For testing purposes, engineering models of 80x86 and 1750A flight computers are located in SEAL and interfaced to simulated flight systems.

The major thrusts of the SEAL are to: support and improve a repeatable software development process; implement and measure effectiveness of the process on flight programs; provide a focal point for software development for LaRC flight projects, and promote technology transfer. The approach is to enforce standard software engineering practices, use state-of-the-art Computer Aided Software Engineering (CASE) tools, and make maximum use of previously developed and tested modules.

Ada compilers are available for PC, MAC, VAX, and SUN computers. There are also Ada cross compilers for embedded 80x86 and 1750A systems. Tools used in the SEAL Software Development Environment include:

- CADRE Teamwork and Ensemble CASE Tools

- Paradigm Plus (Object Oriented Meta-CASE Tool)

- McCabe Tools (Analysis of Complexity, Battlemat Analysis, and Ada Language Parser)

- Ada Measurement and Analysis Tool (AdaMAT/D)

- VAX Software Engineering Tools (VAXset)

- PC Data Acquisition Hardware and Software

- InQuisiX- Reuse Repository Tool

- In-Circuit Emulators

- CADRW Software Analysis Workstation (SAW)

- Logic Analysers/Oscilloscopes

- Titan SESCO 80x86 Flight Equivalent Computer

- PROM Tools

SEAL contains extensive documentation on software development, and software development training is sponsored by the laboratory. SEAL staff members are available to help software developers to get started and to consult as needed.

## **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 actual flight hardware systems not physically implemented) being simulated by computers. In most cases, in order to provide a realistic evaluation of the performance of the flight system 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 the simulated vehicle systems so rapidly and frequently that the pilot is not aware of any time delay or loss of continuity. In recent years flight simulation has included the computer generation of visual scenes such as out-of-the-window views of terrain, sky, and other aircraft; the incremental motions of flight deck and pilot; and the generation of electronic flight displays.

At LaRC, flight simulation is conducted in the Advanced, Real-Time Simulation System (ARTSS). The current status of the ARTSS is shown schematically in Figure 3. The principal components are the two Convex computers that comprise the Flight Simulation Computing Subsystem (FSCS); the Configuration Switch; the CAMAC "highways," and a collection of facilities including control consoles, a Computer Generated Image (CGI) system and simulators for specific flight systems. When a simulation is initiated on one of the computers, the configuration switch is commanded by the program to activate all the necessary facilities on one or two highways.

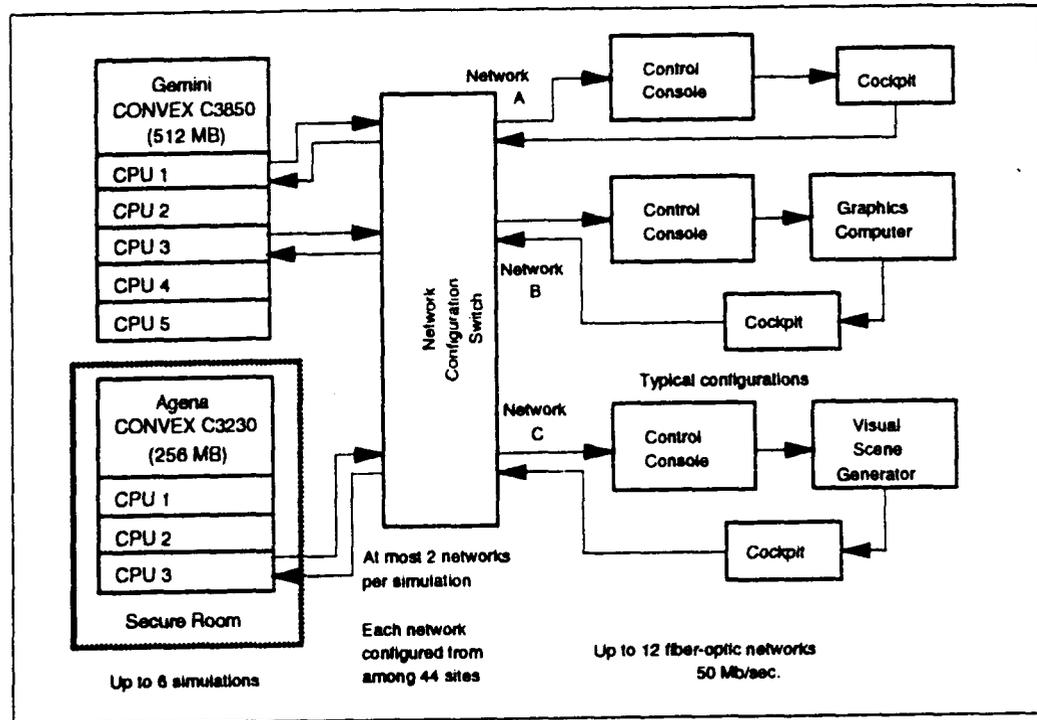


Figure 3. Advanced Real-Time Simulation System

The FSCS consists of two Convex Computer Corporation supercomputers having similar architectures supporting both 64- and 32-bit scalar, vector, and parallel processing technology. One (Gemini) is a C3850 with 5 CPUs and 512 MBytes of common memory, and the other (Agena) is a C3230 with 3 CPUs and 256 MBytes of common memory. Agena is located in a secure area so that it can be used for classified processing and simulations when necessary. Four of Gemini's processors and two of Agena's processors can be used simultaneously for separate simulations, providing a total capacity of 6 simultaneous simulations. Using a benchmark simulation, it has been found that each CPU of the C3850 runs 5.6 times faster and each CPU of the C3200 runs 2.7 times faster than the previously used CYBER 175.

The real-time operating system consists of a full UNIX kernel with additional features necessary to support simulations operating in real time. Normal processing is interrupted by real time requests and the response to these requests is very rapid.

The ARTSS employs eight high-speed digital networks called CAMAC highways. At any given time, six totally independent simulations can be accommodated simultaneously. An aircraft simulation model is solved on one of the two Convex computers and it is normally assigned one highway. In certain special cases, a second highway can be assigned to a job. The purpose of the network is to communicate data

between the central computers and the simulation sites (control console, cockpit, display generator, etc.). At set-up time, each job requests the sites it needs by a computer control statement. If the sites are available, the Network Switch, shown in the center of Figure 3, is dynamically configured and the job will be elevated to real-time status. The Network Switch provides for up to 44 sites to be configured into up to 12 networks in this way.

All simulations are synchronized to a central clock which provides signals that are sent to the sites via a star network sharing the same fiber optic cable as the CAMAC highways. Clock signals trigger the start of analog-to-digital conversion and notify the central computer of the beginning of every simulation cycle.

The Computer Generated Image System (CGIS) is a facility for generating visual scenes for all but one of the Langley simulators. It is a four-channel Evans and Sutherland CT-6 system with each channel having two display processors capable of updating 500,000 pixels in real-time. It contains two terrain data bases: the Dome data base; and the Denver, Stapleton airport environs data base.

In April, 1993, a contract was awarded to Evans and Sutherland to deliver three Image Generator Subsystems (IGS) to LaRC. The first will be available for production in September 1994, the second in February 1995, and the third in February 1996. Once all of these are in place, it will be possible to simultaneously run from three to five simulations with out-the window images. Additional features provided by the new IGS's include additional data bases, higher performance, two independent layers of clouds, and collision detection.

Currently under construction, the Cockpit Motion Facility (CMF) will considerably enhance the Center's flight simulation program by providing motion cues for several of the simulators. The completed facility will contain four motion capable flight simulators and a state-of-the-art six-degree-of-freedom motion system that can be used interchangeably with any of the designated simulators. The CMF will consist of two building additions (Phase 1 and Phase 2), the new motion system, extensive modifications to two existing flight simulators, and two additional simulators to be acquired in the future. An additional major component under consideration is the acquisition of a Wide-angle Infinity Display Equipment (WIDE) system which when connected to the Advanced Computer-Generated Image (ACGI) system will give a large field-of-view display to the simulator crew members.

## **Using the Complex**

In order to log into any of the computers on the SNS or NCS, a user must be approved by his Division Computer Manager (DCM) and authorized to use one or more computer accounts. The user is then given a user name and an initial password. The password can be changed by the user at any subsequent time. The computer resources expended by the user are charged to a default account which can be changed by the user to any authorized account at login time. The use of computer accounts is monitored by the DCM.

The use of other equipment or services, such as scientific visualization, or flight simulation, must be arranged for through the appropriate ISD organization.

## **Documentation, Training, and Assistance**

A rack containing manuals for all equipment and software in the CSCC is located for reference in the OCO. Individual copies of many of these documents can be requested from the OCO. On-line documentation is available through man pages and notes files on the SNS computers. Computer bulletins and LaRCNET bulletins are published to notify users of changes in the status of CSCC systems and LaRCNET respectively, and to announce current events. Bulletins are sent via e-mail (or hard-copy to LaRC mail stops on request) to all users of the CSCC.

Training in the use of CSCC systems is offered periodically through courses announced via computer bulletins. Also, the Employee Development Branch offers computer related courses and maintains a number of self-teaching video and hands-on courses at the Learning Center (Building 1194, telephone 864-2325).

Assistance to users of the CSCC or communications systems is available from different sources, depending on the nature of the problem. The OCO maintains an "ISD Customer Services List" which gives telephone numbers and e-mail addresses for various areas. This list is also available electronically by reading the ascii file `~isdcs/list` on all SNS computers.

ATTACHMENT 8  
TECHNICAL QUESTIONS

## QUESTION #1 HIGH PERFORMANCE COMPUTING

### Background:

Assume two large three-dimensional scientific applications that are currently executed independently with different data structures and computational domains. For example, these codes could be: (1) a three-dimensional compressible turbulence model using a finite difference scheme and (2) a structural mechanics code using finite elements. The two computational domains share a common boundary. The codes are independent because of computational requirements, but in reality need to be closely coupled, through the periodic exchange of boundary data, to provide an accurate model of the physical phenomena.

### Question:

Describe a methodology for completing the conversion of these two independent codes into a single coupled application on a parallel computer. Discuss the programming issues that need to be addressed in the parallelization effort. Assume that neither application has previously been executed in parallel. Detail any assumptions made, such as the chosen applications or specific computing environment. Address the issues of code optimization and software tools required to complete an efficient conversion.

## QUESTION # 2 GEOLAB

### Background:

Many of the tasks performed in GEOLAB involve the preparation of surface models and grids for airplane and spacecraft configurations. The surfaces and grids are used in Computational Fluid Dynamics (CFD) and Computational Structures (CS) analyses. Often these analyses are compared with wind tunnel and other experimental results. The surface data provided GEOLAB often comes in the form of computer aided design (CAD) data generated by wind tunnel model designers. Because the goal of the designer is to specify a model that can be machined as efficiently as possible, the model design usually is not directly compatible with the requirement for computational analyses (i.e. CFD and CS). For instance, trailing edges of lifting components are defined with finite thicknesses rather than as closed sharp edges so they can be milled. Care may not be taken in producing especially smooth surfaces or precisely placing neighboring surfaces to insure that there are no gaps, overlaps, or discontinuities between surface patches. Such requirements are not relevant to the machining process or can be resolved by sanding or other shop processes. In order to use this kind of design data for detailed CFD and CS analyses, these imperfections must be removed from the surface model.

### Question:

Discuss your approach in dealing with the surface modelling problems for the airplane described below, describe the topology you might define in order to build a multi-block structured volume grid about this vehicle, and the grid generation processes necessary to produce the grid. Include in your discussion, a description of how you will insure that the surface definition and grid will be

accurate and suitable for use in Euler/Navier-Stokes flow solvers. Also indicate what software tools you would prefer to use to solve this problem and state how long it would take you to do the necessary work.

Model description:

Fuselage with sharp pointed nose and tail sections

Double delta wing

Wing intersects the fuselage completely

Centerline tail

Horizontal tail not in the same plane as the wing

Missing fillets between components

Missing wing tip definition

Open trailing edge of wing

Several subpatches define fuselage and wings, small gaps exist between neighboring patches.

A discontinuity exists between major sections defining the circular fuselage.

### QUESTION # 3 DATA VISUALIZATION

Background:

Assume that there exists a large CFD simulation program which runs on a parallel computer. This program models the flow field surrounding and on the surface of a given structured grid geometry. The computed flow field values include scalar (e.g. pressure and density) and vector (e.g. velocity and momentum) quantities for randomly spaced 3D points. The output from this program is currently placed in a file for subsequent postprocessing and visualization on color workstations running X Windows.

Question:

Describe an approach for providing computational steering of this program's execution through the use of "real-time" visualizations, dynamic selection of viewing variables, parameter and variable modification, and terminate/pause/restart capabilities. Address relevant visualization issues, load distribution, and generality of solution.

### QUESTION # 4 DATA MANAGEMENT

Background:

Data Management has been cited as one of the major challenges facing NASA Langley in the next decade. Langley produces large quantities of valuable scientific data yearly. Each researcher currently manages their own data, which may not facilitate adequate management for sharing within and between disciplines. For a typical project, metadata (information about the scientific data) and the actual data need to be managed. The actual data stored may be image data, multi-dimensional numerical data or textual data. The metadata may reside in existing documents or the researcher's memory.

**Question:**

Define an approach for design of a flexible, general-purpose data management system for scientific data and its associated metadata at LaRC. The design approach should provide for input, storage, manipulation, query, and extraction for analysis of the large volumes of diverse data to and from different applications in a distributed computing environment. The design approach should provide for extensibility to other possible (as yet undefined) types of data, portability across platforms, and usability in a multidisciplinary and open systems environment. Include in your discussion the various hardware and software to be utilized for the user-interface, data storage, and data management. Note that the hardware/software proposed is not limited to that which is currently owned by NASA, although the proposed design must be usable within a LaRC researchers computing environment. The researchers computing environment consists of networked supercomputers and Sun and Silicon Graphics workstations running the UNIX operating system.

**QUESTION #5 SOFTWARE ENGINEERING****Background:**

Some LaRC software development efforts are critical to their project and require a high level of reliability. To achieve this reliability, using a comprehensive software engineering lifecycle approach is desirable. Unfortunately, funding and schedule constraints frequently do not allow this and appropriate technical risks must be taken. For example, a typical cost estimation for a software project might indicate the need for a 12 man-year effort, such as four (4) software engineers/programmers over a three (3) year period. Project constraints, however, may only be able to provide for 9 man-years, either by reducing the yearly level of effort and/or the schedule duration.

**Question:**

Describe a software engineering approach to reduce the manpower and schedule required to complete the project while maintaining a high level of confidence that the project will be successful. Include software engineering elements that might be eliminated or reduced with manageable risks and those that should be maintained or increased to prevent unacceptably high technical risks.

ATTACHMENT 9  
MONTHLY PROGRESS REPORT FOR SOCIOECONOMIC GOALS

126 (NAS1-#/#)

TO: NASA Langley Research Center  
 126/Contract Specialist  
 Hampton, VA 23681-0001

FROM: (Insert Company Name)

SUBJECT: Monthly Progress Report for Socioeconomic Goals -- NAS1-\_\_\_\_\_

for Period           month/day/year          

15a. Small Business Concerns: \$ \_\_\_\_\_  
 (include disadvantaged)

15b. Large Business Concerns: \$ \_\_\_\_\_

15c. Total (sum of Sm & Lg Bus): \$ \_\_\_\_\_

16. Small Disadv. Bus. Concerns: \$ \_\_\_\_\_

    Woman-Owned Small Bus.: \$ \_\_\_\_\_  
     (include as part of  
     15a & 16 above)

    Historical Black Colleges/Univ: \$ \_\_\_\_\_  
     and/or Minority Institutions  
     (include as part of 15a & 16 above)

cc:  
 144/Acquisition Support Branch

SAMPLE

AMENDMENT OF SOLICITATION / MODIFICATION OF CONTRACT

2. AMENDMENT/MODIFICATION NO. 1	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		7. ADMINISTERED BY (If other than Item 6)	

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  TO ALL CONCERNED	(#)	9A. AMENDMENT OF SOLICITATION NO. 1-122-1150.3059
	X	9B. DATED (SEE ITEM 11) 4/15/94
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  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 COPY 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 ACKNOWLEDGMENT 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.

(W)	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 or 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 1-122-1150.3059, Computational Analysis and Programming Support Services

The purposes of this amendment are to (1) change the solicitation; (2) provide questions and answers; (3) provide information presented at the preproposal conference held on April 29, 1994, and (4) provide a list of preproposal conference attendees.

(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) ROSEMARY C. FROELICH	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Rosemary C. Froelich</u> (Signature of Contracting Officer)	16C. DATE SIGNED 5-11

The following changes are made:

A. The hour and date specified for receipt of offers, as shown in Block 9 of Standard Form 33, is rescheduled for 4:00 p.m., Local Time, June 15, 1994.

B. Section G, G.2 is revised as follows:

"G.2 GOVERNMENT-PROVIDED PROPERTY

A. 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 its 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.

B. The property set forth in Exhibit C falls within the definition of 'facilities' set forth in 45.301. Any of these facilities that reach the end of their useful life during the contract period, or which are beyond economical repair, shall be deleted from Exhibit C, and will not be replaced by the Government. If the facilities are still needed for contract performance, they must be replaced by the Contractor. Such replacement shall be made with Contractor-owned facilities. Further, the acquisition of facility items for the Government is expressly prohibited unless specifically authorized by the contract or consent has been obtained in writing from the Contracting Officer pursuant to FAR 45.302-1(a)."

C. Section J:

1. Exhibit C, Government Furnished Property, has been revised to include the date of purchase for the equipment and is attached hereto.

2. Government-Provided Software is added as Exhibit G.

D. The Federal Register, Volume 59, Number 67, dated April 7, 1994 and effective April 22, 1994 affects Section L, L.14, SIC Code and Small Business Size Standard (FAR 52.219-22) (JAN 1991), by changing Paragraph (b)(1) as follows:

"(b)(1) The small business size standard is \$18,000,000."

E. Section L, L.35, Proposal Preparation and Submission--Special Instructions:

1. Paragraph C, Proposal Format and Content, Option 2 Based on Page Count, the next to the last sentence is revised as follows:

"The text contained on charts, figures, and tables shall not exceed the amount of text that would be contained in an equal area under the text formatting guidelines stated above."

2. Paragraph D, Factor 1 - Mission Suitability, Subfactor 5, Paragraph b, is revised as follows:

"b. Describe your approach to Total Quality Management and continuous improvement. Describe your approach to monitoring and anticipating changes in technology and responding to these changes as they affect the work being performed under this contract."

3. Paragraph D, Factor 1 - Mission Suitability, Subfactor 6, Paragraph b, is revised as follows:

"b. Current and proposed salary and a signed statement from each individual evidencing their commitment to work on this procurement at the proposed salary and fringe benefits."

4. Paragraph E.1, Factor 2 - Cost, Paragraphs e.(2), e.(12) and e.(13) are revised and Paragraph e.(18) is added.

"(2) In the second line of the second paragraph, the word "Analysis" is changed to "Analyst."

(12) Specified Other Direct Costs (ODC)--This is estimated at \$125,000 annually for software (40%), travel (40%), and training (20%) that are required for performance of the Statement of Work (Ref. C.1). Do not escalate. This estimate does not include any company burden.

(13) 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 ODC on the Cost Forms. This category might include such categories as equipment maintenance, subcontract burden, recruiting and relocation costs, general liability insurance, and city/county business license tax. If cost for general liability insurance is not an ODC, specify which element includes these costs. You should consult the City of Hampton and other applicable local jurisdictions to determine applicable business license taxes.

(18) Facilities--Fully explain and support the costs and provide rationale for the methods of acquisition selected.

(a) Off-the-shelf, general purpose equipment costs include those addressed in G.2 above and shall be proposed in accordance with NASA Procurement Notice (PN) 89-57, dated March 21, 1994, which is included as Attachment 10.

(b) Building and related costs are those costs, reference Paragraph L.32, to house 100% of the contract personnel. 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."

F. Section M, M.3, Factor 1 - Mission Suitability, Subfactor 5, Paragraph b is revised as follows:

"Your approach to Total Quality Management and continuous improvement; and your approach to monitoring and anticipating changes in technology and responding to these changes as they affect the work being performed under this contract."

G. Attachment 5, Government Estimated Staffing Requirements and Minimum Position Qualifications, has been revised and is attached hereto. Revisions to this attachment are indicated by change bars in the margin.

H. Attachment 6, Key Personnel Requirements, has been revised and is attached hereto. Revisions to this attachment are indicated by change bars in the margin.

I. NASA Procurement Notice PN 89-57 is added as Attachment 10 to the RFP.

J. Questions and Answers applicable to this RFP are attached hereto.

K. Copies of the Preproposal Conference viewgraphs are attached hereto. The conference was held April 29, 1994.

L. List of Preproposal Conference attendees are attached hereto.

EXHIBIT C  
GOVERNMENT-FURNISHED PROPERTY

<u>NASA ECN</u>	<u>ITEM DESCRIPTION</u>	<u>MODEL/PART</u>	<u>SERIAL #</u>	<u>MFG</u>	<u>DATE OF PURCHASE</u>	<u>UNIT PRICE</u>
	Display Unit	NCD-17c	13408591	NCD	08/91	\$ 2,595.00
	Disk Drive Unit	M2688	F0121T8M2688	Apple	04/90	\$ 1,187.00
	Disk Drive Unit	M22639A	J1611	Fujitsu	05/90	\$ 3,240.00
	Terminal, Data Processing	VT320-C2	HK03260180	Dec	09/90	\$ 362.00
	Terminal, Data Processing	VT320-C2	HK03260185	Dec	09/90	\$ 362.00
	Terminal, Data Processing	NCD17CP5K	3203010	NCD	10/90	\$ 4,760.00
	Computer, Mini	4/65C-8	034F0129	Sun	10/90	\$ 9,458.00
	Monitor	HM-4419	027CN1398	Sun	10/90	\$ 750.00
	Drive, CD ROM	X55911	36861108	Sun	10/90	\$ 667.00
	Disk, Subsystem	F63D-T2-Z	30063	CATA Tech Inc	10/90	\$ 2,725.00
	Computer, Micro	NCD17CP3	0391C00739	NCD	06/91	\$ 2,345.00
	Monitor	NCD17C	5207311	NCD	06/91	\$ 1,005.00
	Disk, Drive Unit	ST41200N	WJ005904	CITA Tech Inc	07/91	\$ 2,550.00
	Subsystem, Tape	TFH-028	AA561060	CITA Teac Inc	07/91	\$ 920.00
	Tape Drive	8200	35386	Atrecon Inc	07/91	\$ 2,324.00
	Printer, ADP	M6000	CA105PFL	Apple	07/91	\$ 3,925.00
	Computer, Micro	MACIIS180	F2119HYX	Apple	07/91	\$ 4,174.00
	Monitor, Color	MO401	7080760	Apple	07/91	\$ 680.00
	Interface, Ethernet	EPO100	011E0B	Dyna Comm	07/91	\$ 350.00
	Computer, Micro	48633DXC	245320	Gateway 2000	08/91	\$ 2,995.00
	Monitor	CS1572FS	MAL126263	Gateway	08/91	\$ 400.00
	Computer, Micro	48633DXC	245331	Gateway 2000	08/91	\$ 2,995.00
	Monitor	PMV1488	MA9710444	Gateway	08/91	\$ 400.00
	Computer, Micro	48633DXC	245332	Gateway 2000	08/91	\$ 2,995.00
	Monitor	PMV1488	MA9710677	Gateway	08/91	\$ 400.00
	Monitor	1420+	10600668	Goldstar Co	08/91	\$ 285.00
	Computer	NCD-17c	13408524	NCD	08/91	\$ 2,595.00
	Computer	NCD-19c	413992-150	NCD	10/91	\$ 3,600.00
	Computer, Micro	48633DXC	1238220	Gateway 2000	03/93	\$ 2,045.00
	Monitor	CS15722FS	MHL131861	Gateway	03/93	\$ 400.00
	Computer, Micro	48633DXC	1238219	Gateway 2000	03/93	\$ 2,045.00
	Monitor	CS1572FS	MALA20267	Gateway	03/93	\$ 400.00
	Computer, Micro	48633DXC	1252969	Gateway 2000	03/93	\$ 2,445.00
	Monitor	CS1572FS	MALA14041	Gateway	03/03	\$ 400.00
	Computer	NCD-19c	41506078	NCD	03/93	\$ 3,297.00
	Display Unit	NCD-19c	41506077	NCD	03/93	\$ 3,297.00
	Computer	NCD-19c	41506075	NCD	03/93	\$ 3,297.00
	Disk, Subsystem	ST42100N	TL504588	CITA	03/93	\$ 2,626.00
	Computer, Micro	4DX2-66V	1524473	Gateway 2000	07/93	\$ 2,435.00
	Monitor	CS1672FS	MHH122672	Gateway	07/93	\$ 400.00
	Computer, Micro	4DX2-66V	1524474	Gateway 2000	07/93	\$ 2,435.00
	Monitor	CS1572FS	MHH117350	Gateway	07/93	\$ 400.00
	Computer, Micro	4DX2-66V	1524475	Gateway 2000	07/93	\$ 2,435.00
	Monitor	CS1672FS	MHH118413	Gateway	07/93	\$ 400.00
	Computer, Micro	4DX2-66V	1524476	Gateway 2000	07/03	\$ 2,435.00
	Monitor	CS1572FS	MHH118830	Gateway	07/93	\$ 400.00
	Printer, Laser	33481A	3128JG5RV3	HP	07/93	\$ 847.00
	Printer, Laser	33481A	33128JG5RSTS	HP	07/93	\$ 847.00
	Computer, Micro	Baby AT	1866082	Gateway 2000	03/01/94	\$ 2,500.00
	Monitor	CS1672FS	MH1535129979	Gateway	03/01/94	\$ 400.00
	Computer, Micro	Baby AT	1866079	Gateway 2000	03/01/94	\$ 2,500.00
	Monitor	CS1572FS	MH1535130254	Gateway	03/01/94	\$ 400.00
G74355	Printer, Laser	Laser JT III	NONE	HP	04/20/91	\$ 1,529.00
G75929	Computer, Mini	4D/210VXG	S11650	Silicon Graphics	06/28/90	\$67,344.00
G75930	Display Unit	CM2086A396	YDF000154	Hatachi Mfg Co	06/28/90	\$12,000.00
G75931	Interface, Computer	P4XSCI	NONE	Silicon Graphics	06/28/90	\$ 750.00
G76268	Computer, Micro	M5840	F9490D2	Apple	07/30/90	\$ 5,293.00
G76269	Display Unit	MO401	5384391	Apple	07/30/90	\$ 626.00
G79420	Disk Drive Unit	NONE	B020603	CITA	11/30/90	\$ 1,795.00
G79421	Disk Drive Unit	NONE	B020610	CITA	11/30/90	\$ 1,795.00
55114	Scanner, Computer	726(1020)	7C72600737	Dest Data Corp	03/18/88	\$ 2,350.00
61051	Display Unit	HM41195-AAC	904AR0540	Sun	03/30/89	\$ 5,680.00
61052	Computer, Mini	247	907F0301	Sun	03/30/89	\$ 4,032.00
61053	Display Unit	HM41195-AAC	903AR0485	Sun	03/30/89	\$ 5,680.00
61054	Computer, Mini	247	907F0587	Sun	03/30/89	\$ 4,032.00
62472	Disk Drive Unit	DSU-1-600B	2504	Artecon Inc	06/08/89	\$ 3,730.00
137613	Terminal, Data Processing	9220	A68061112A	Tele-Video	11/14/86	\$ 427.00
189757	Reader, Microfiche	DM-100	3720	Datagraphics	08/13/81	\$ 192.00
189758	Reader/Printer, Microfiche	1500DL	5799	Datagraphics	08/13/81	\$ 1,653.00
220244	Display Unit	Color 700	Y4K 002302	AMDEX	12/16/85	\$ 450.00
258141	Mega XT CPU & Keyboard			MEGA	04/10/86	\$ 337.00
258682	Monitor	5154-001	0107341	IBM	05/06/86	\$ 579.00
260270	Printer, ADP	P660	580026661	NEC	08/27/86	\$ 449.00

281838	Monitor	NONE	24571	Sperry	02/23/90	\$ 450.00
282421	Computer, Micro	5170099	5037693	IBM	12/01/88	-\$ 7,340.00
282781	Computer, Micro	XI	14609655150	IBM	06/27/85	\$ 1,520.00
404846	Printer, ADP	92P	105250	Okidata	02/28/84	\$ 510.00
462586	Calculator, Electric, Printer	TI-59	7367096	Texas Instruments	04/29/80	\$ 229.00
462587	Printer, Digital	PC-100A	3032557	Texas Instruments	09/20/77	\$ 168.00
549611	Terminal, Data Processing	VS240A	AB1101G36	Digital	06/30/89	\$ 1,624.00
846244	Terminal, Data Processing	5510	250789100373	Micro-Term	06/30/89	\$ 330.00
846313	Display, Network	NCD-16P3	915 SFO08 4TF1	NCD	07/05/89	\$ 2,720.00
847308	Computer, Mini	3/60	932F1020	Sun	09/25/89	\$ 2,642.00
847309	Display Unit	HM41195-AAC	930ARO200	Sun	09/25/89	\$ 8,000.00
849226	Printer, ADP	FX-185	5000624	Epson	08/13/81	\$ 699.00
849229	Printer, Digital	RX80	330935	Epson	08/13/81	\$ 425.00
849230	Terminal, Data Processing	4109A	BO11088	Tektronix	02/26/86	\$ 6,926.00
849231	Printer, ADP	556-1	2298890	CDC	08/14/86	\$16,857.00
849235	Terminal, Data Processing	MT420	9479860800108	Micro-Term	08/13/81	\$ 520.00
849236	Terminal, Data Processing	MT420	9479860800106	Micro-Term	08/13/81	\$ 520.00
849237	Terminal, Data Processing	MT420	9479860800179	Micro-Term	08/13/89	\$ 520.00
849239	Terminal, Data Processing	MT420	9479860800101	Micro-Term	08/13/89	\$ 520.00
849240	Terminal, Data Processing	MT420	9479860800104	Micro-Term	08/13/89	\$ 520.00
849241	Terminal, Data Processing	4109A	BO32800	Tektronix	12/09/86	\$ 6,926.00
849242	Computer, Micro	XT	NONE	Bytes Unlimited	12/09/86	\$ 1,830.00
849243	Monitor	190-95282	NONE	Luxor	08/13/81	\$ 125.00
849244	Computer, Micro	4000	125651	Mega Corporation	05/21/87	\$ 1,204.00
849246	Printer, ADP	PSJET	448	QMS	07/14/87	\$ 4,295.00
849247	Computer, Micro	M5000	F7194RLM5030	Apple	08/12/87	\$ 4,636.00
849248	Monitor	CPD-1302	5022121	Sony	08/13/81	\$ 775.00
849249	Printer, ADP	M6000	CA839270	Apple	01/04/89	\$ 3,219.00
849250	Computer, Mini	HM-4119-S-AA	852ARO262	Sun	03/18/89	\$18,598.00
849251	Computer, Mini	600201601	905F2013	Sun	03/08/89	\$ 8,950.00
849252	Computer, Mini	GDM-19628	9248DW131	Sun	03/08/89	\$15,044.00
849253	Terminal, Data Processing	5510	2506890101310	Micro-Term	03/11/81	\$ 432.00
849254	Terminal, Data Processing	5510	2506890100427	Micro-Term	08/13/81	\$ 432.00
849255	Terminal, Data Processing	5510	2506890101306	Micro-Term	08/13/81	\$ 432.00
849256	Terminal, Data Processing	5510	2506890101307	Micro-Term	08/13/81	\$ 432.00
1084191	Monitor	JC2002VMA1	SN11CO13785	NEC	02/20/91	\$ 2,219.00
1084194	Display Unit	Multisync 5D	NONE	NEC	02/20/91	\$ 2,219.00
1084469	SPARCStation	600-2679-03	104F3192	Sun	03/11/91	\$ 6,416.00
1084470	SPARCStation	600-2679-03	107F1081	Sun	03/11/91	\$ 6,416.00
1084471	Display Unit	GDM-1662B	9105CZ2378	Sun	03/11/91	\$ 600.00
1084472	Display Unit	GDM-1662B	9105CZ3414	Sun	03/11/91	\$ 600.00
1085341	Disk Drive Unit	M2261S	LP910211559H2	Fujitsu	05/09/91	\$ 1,500.00
1085815	Display Station, Comp Graph	XP29	BO50894	Tektronix	06/10/91	\$ 4,616.00
1085816	Monitor	119-4073	JPF0550186	Tektronix	06/10/91	\$ 1,232.00
1087441	Display Unit	JC2002EMA1	16D007495	NEC	08/16/91	\$ 2,295.00
1087442	Printer, Laser	Laser JT III	NONE	HP	08/16/91	\$ 1,514.00
1087839	Computer, Micro	486	NONE	MYLEX	08/30/91	\$ 6,109.00
1087840	Computer, Micro	486	NONE	MYLEX	08/30/91	\$ 6,109.00
1088079	Disk Drive Unit, Optical	MCE165051	BS30252	Storage Dim., Inc	09/10/91	\$ 3,000.00
1088400	Computer, Micro	NCD 17C	NONE	NCD	10/02/91	\$ 1,465.00
1088401	Display Unit	17C	NONE	NCD	10/02/91	\$ 1,130.00
1088530	Printer, ADP	3349A	3104JE8945	HP	09/16/91	\$ 1,500.00
1088628	Display Unit	Multisync 5D	NONE	NEC	10/14/91	\$ 2,005.00
1091328	SPARCStation, IPC	600-2575-06	20763033	Sun	03/12/92	\$ 2,346.00
1091329	Display Unit	GDM-1662B	9138DY0189	Sun	03/12/92	\$ 3,110.00
1092676	Printer, Laser	PS-410-1	Q0059821	QMS	06/11/92	\$ 1,489.00
1092677	Printer, Laser	PS-410	NONE	QMS	06/11/92	\$ 1,489.00
1092679	Printer, Laser	PS-410-1	SNQ006037	QMS	06/11/92	\$ 1,489.00
1093233	Display Unit	Multisync6FG	NONE	NEC	06/08/92	\$ 2,886.00
1156014	Monitor	CS1572FS	MAL126263	Gateway 2000	07/23/92	\$ 400.00
1150618	Computer, Micro	Gateway 2000	NONE	Gateway	07/23/92	\$ 4,599.00
1156061	Computer, Mini	486	TOWER	Gateway 2000	08/11/92	\$ 4,650.00
1156187	CD ROM Reader	NONE	B2704865	NEC Intersect	----	0.00
1156187	Computer, Micro	486DX2/50E	0674603	Gateway 2000	08/13/92	\$ 4,250.00
1255204	Display Unit	NCD 17C	13408591	Network Computing Devices	10/29/91	\$ 2,925.00
1256999	Display Unit	HL7965KW-CD	205000568	Mitsubishi	08/03/93	\$ 1,500.00
1258417	Computer, Micro	CMNB007	080069073BDF	Silicon Graphics	10/14/93	\$24,703.00

EXHIBIT G  
GOVERNMENT-PROVIDED SOFTWARE

NO.	Copies	Description	Version
1		4th Dimension	3.0.5
1		Alsys First Ada	4.4.2
3		Borland C++	3.1
1		Borland C++	3.0
3		Brief Editor	3.1
1		BuilderXcessory	2.0
1		CA-Cricket Graph III	1.10
1		CASE/W	4.01
1		CenterLine	4.0.2
1		Central Point AntiVirus	1.2
1		Close-Up	4.01
1		Control Data Connect	1.00
3		Corel Draw	4.0
1		Cricket Draw	1.01
3		Crosstalk for Windows	1.2
1		DESQview 386	2.2
6		Exceed/W	3.3.3
1		Fastback+	2.1
1		Flash-It	3.0.1
1		FrameMaker	1.2
1		FrameMaker	3.1
20		FTP/Software PC/TCP-supplied by NSO for each PC	2.0
2		Grammatik	5.0
1		Grammatik for Windows	2.0
1		Graphics Software Systems PC-Xview	1.11
1		Graphics Ultra Pro	1.1
1		Janus Ada	4.7
3		Lantastic/AI	5.0
1		MacDraw II	1.0v1
1		MacDraw Pro	1.5v2
1		MacinStor CDEV	3.0.2
1		MacinStor Installer	3.0.2
1		MacTCP/MacTCP Token Ring	1.1
1		MacTCP/MacTCP Token Ring	1.1.1
1		MacTerminal	2.2
1		MacWrite II	1.1
1		MacX	1.2
1		Micrografx Designer	3.1
1		Micrografx Designer	4.0
1		Motif	1.1
2		MPW Shell	3.2
3		MS Access	1.0
3		MS DOS	5.0
1		MS DOS	6.0

1	MS Excel	2.2a
1	MS Excel	3.0
5	MS Excel for Windows	4.0
6	MS Excel	5.0
1	MS Mail	3.0
1	MS Office Manager	4.0
5	MS PowerPoint	3.0
6	MS PowerPoint	4.0
7	MS Project	3.0
1	MS Quick C	2.51
2	MS Quick C for Windows	1.0
1	MS Test	1.0
4	MS True Type Font Pack for Windows	none
2	MS Visual C++	1.5
2	MS Windows	3.0
1	MS Windows	3.1
6	MS Windows NT	3.1
4	MS Word for Windows	2.0
1	MS Word for MAC	4.0
1	MS Word for MAC	5.1a
6	MS Word for Windows	6.0
1	MS-DOS	4.01
2	Norton Antivirus	1.50
3	Norton Commander	3.0
4	Norton Commander	4.0
2	Norton Desktop	1.0
3	Norton Desktop for Windows	2.0
4	Norton Desktop	2.2
3	Norton Utilities	6.0
5	Norton Utilities	7.0
1	Novell LAN Workplace	4.0
1	PageMaker	2.0a
1	Periscope	5.21
1	Pharlap DOS 286 Extender	2.5
1	QuickTime	1.5
1	ResEdit	2.1.1
1	SGI ANSI C Compiler	3.10.1
1	SGI Compiler	1.1
1	SGI FORTRAN Compiler	3.4.1
1	SGI IRIX (Operating System)	4.0.5
1	SGI IRIX	4.0.1
2	SGI NFS	4.0.1
1	Sun FORTRAN	1.4.1
1	SunOS	4.1.1
1	SunOS	4.1.3

1	SunVision	1.0
1	System Software	7.0
2	System Software	7.0.1
3	TCP/Connect II	1.2
1	Tecplot	6.0a
2	Vedit	3.7
4	VISIO	2.0
1	Visual Numerics for Wave CL	4.2
1	Visual Numerics for Wave P&C	2.0
1	WaveFront Advanced Visualizer	3.0.2
1	Windows SDK	3.1

ATTACHMENT 5

GOVERNMENT ESTIMATED STAFFING REQUIREMENTS  
AND MINIMUM POSITION QUALIFICATIONS

## Government Estimated Skill Mix

<u>Position</u>	<u>Number of Positions</u>	<u>Number of SECRET Clearances</u>	<u>Area of Expertise</u>
Senior Analyst	1	0	Mission Software*
	1	0	Surface Modeling & Grid Generation*
	2	0	High Performance Computing
	1	0	Data Visualization
	1	0	Data Management
	1	0	Software Engineering
Computer Scientist	3	0	Software Engr./Mission Software
	2	0	Surface Modeling/Grid Generation
	1	0	High Performance Computing
	2	0	Data Visualization
	2	1	Data Management
Analyst	4	0	Software Engr./Mission Software
	2	0	Surface Modeling/Grid Generation
	1	0	High Performance Computing
	4	0	Data Visualization
	2	0	Data Management
Programmer A	4	0	Software Engr./Mission Software
	1	0	Surface Modeling/Grid Generation
	1	0	High Performance Computing
	3	0	Data Visualization
	2	0	Data Management
Programmer B	1	0	Software Engr./Mission Software
	1	0	Surface Modeling/Grid Generation
	1	0	High Performance Computing
	1	0	Data Visualization
	1	0	Data Management
Programming Aide	1	0	Software Engr./Mission Software
	1	0	Data Visualization
Total	48	1	

\*Key Personnel Requirements are described in Attachment 6.

## GOVERNMENT ESTIMATED STAFFING SUMMARY

<u>Job Title</u>	<u>Positions</u>
1. Senior Analyst	7
2. Computer Scientist	10
3. Analyst	13
4. Programmer A	11
5. Programmer B	5
6. Programming Aide	<u>2</u>
Total	48

## GENERAL POSITION DESCRIPTIONS

JOB TITLE: Senior Analyst (High Performance Computing)

ESTIMATED EFFORT: Two (2) Positions

QUALIFICATIONS: Should have a Master of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in the development of scientific applications for high performance computing systems, with at least two years experience on highly parallel or distributed parallel systems. Should have experience in the analysis, debugging, optimization and performance monitoring for large scientific applications. One senior analyst should have experience in CFD, CSM, or multidisciplinary design and optimization applications.

JOB TITLE: Senior Analyst (Data Visualization)

ESTIMATED EFFORT: One (1) Position

QUALIFICATIONS: Should have a Master of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in the design, development, and utilization of data visualization software on high speed graphics workstations. Should have good working knowledge of the application of graphics, animation, image processing, and multimedia tools and techniques to scientific problems.

JOB TITLE: Senior Analyst (Data Management)

ESTIMATED EFFORT: One (1) Position

QUALIFICATIONS: Should have a Master of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in designing, implementing and documenting data base applications using a commercially available data base management system (DBMS). Should have experience in defining user data requirements, designing and implementing graphical user interfaces to the data base application and using the Standard Query Language (SQL). Should have experience with distributed data management.

JOB TITLE: Senior Analyst (Software Engineering)

ESTIMATED EFFORT: One (1) Position

QUALIFICATIONS: Should have a Master of Science Degree in Computer Science, Computer Engineering, Electrical Engineering, or a related field. Courses in software engineering or equivalent experience is also required.

Should have eight (8) years experience in software development and at least two years of experience in managing the development of real-time, embedded software systems. Should possess a strong software engineering background which includes experience with all phases of the software development life cycle such as cost estimation, requirements, design, implementation, testing, and maintenance. Should also be experienced with software process elements such as evolutionary spiral models, waterfall models, incremental builds, prototyping, object-oriented principles, the Ada programming language, metrics collection and analysis, verification and validation, quality assurance, CASE tools, and configuration management.

JOB TITLE: Computer Scientist

ESTIMATED EFFORT: Ten (10) Positions

QUALIFICATIONS: Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in the development of large-scale applications or operating systems software. Should have experience in interpreting programming problems in terms of system software interface and hardware characteristics. Should have two (2) years of experience in the area of expertise for which proposed.

JOB TITLE: Analyst

ESTIMATED EFFORT: Thirteen (13) Positions

QUALIFICATIONS: Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have five (5) years experience in the development of scientific computer programs to solve aerospace problems. Work will be conducted on large-scale computer systems, real-time flight computers, and specialized workstations. Should have one year of experience for the area of expertise for which they are proposed.

JOB TITLE: Programmer A

ESTIMATED EFFORT: Eleven (11) Positions

QUALIFICATIONS: Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have three (3) years experience in the development of scientific applications programs.

JOB TITLE: Programmer B

ESTIMATED EFFORT: Five (5) Positions

QUALIFICATIONS: Should have a Bachelor of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have one (1) year experience in the development of scientific applications programs.

JOB TITLE:

Programing Aide

ESTIMATED EFFORT:

Two (2) Positions

QUALIFICATIONS:

Should have a high school diploma or equivalent.

Should have a working knowledge of college algebra, trigonometry, and FORTRAN. Word processing and technical documentation experience is desirable.

Should have one (1) year experience in computer programing.

ATTACHMENT 6  
KEY PERSONNEL

## Attachment 6

### 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 the following:

- (a) Contract Manager (and Deputy Manager, if proposed)
- (b) Senior Analyst (Mission Software)
- (c) Senior Analyst (Surface Modeling/Grid Generation)
- (d) Other (if proposed)

The number and designation of key positions is dependent on your organizational structure. 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 Contract Manager if proposed)

DUTIES: Manages the basic contract work in accordance with the terms of the contract and serves as primary point of contact with appropriate Government personnel on technical and administrative matters. Responsible for selection, promotion, awards, training, separation, disciplinary actions, and day to day operation and management of the contract. Responsible for general work assignments, staff utilization, productivity and compliance with terms of contract or work orders. Responsible for generating and submitting reports in accordance with terms of the contract.

QUALIFICATIONS: Should have a Bachelor of Science Degree in Engineering, Computer Science, Mathematics, Physical Sciences, or a related field.

Should have ten (10) years progressive experience in scientific digital computer applications on large scale digital and flight computers, including five (5) years of management experience in efforts of similar size and scope.

TITLE: Senior Analyst (Mission Software)

DUTIES: Acts as principal technical contact between the Government and the Contractor for work orders involving mission software for LaRC aerospace flight experiments. Receives general requirements for mission software and subdivides work into functional elements such as real-time, embedded instrument control software and ground support software. Participates, as mission software representative, in technical meetings for planning and implementing flight experiments. Provides technical direction and coordinates total development of software systems. Plans and coordinates contract personnel involvement in onboard flight experiments and mission operations.

QUALIFICATIONS: Should have a Master of Science Degree in Engineering, Computer Science, Mathematics, Physical Sciences, or a related field.

Should have eight (8) years experience in the total system design, development, testing, and integration of real-time, embedded instrument control software and associated ground support software. Should possess a strong working knowledge of software development environments, embedded system tools, and modern software engineering practices.

TITLE: Senior Analyst (Surface Modeling and Grid Generation)

DUTIES: Acts as principal contact between the Government and the Contractor for work orders involving grid generation and geometric modeling. Provides technical direction and coordinates Contractor's effort in supporting GEOLAB and tasks in this work area. Participates, as Contractor's representative, in technical meetings for planning and coordinating GEOLAB, surface modeling and grid generation activities in support of specific work orders.

QUALIFICATIONS: Should have a Master of Science Degree in Engineering, Mathematics, Physical Sciences, Computer Science, or a related field.

Should have eight (8) years experience in grid generation techniques including structured and unstructured methods to produce three dimensional grids suitable for Computational Fluid Dynamics (CFD) and Computational Structural Mechanics (CSM) analyses. Should possess a good working knowledge of state-of-the-art computer aided design software, surface modeling techniques, data exchange standards for geometry and grids, standard CFD and CSM analysis software as applied to the design of aerospace vehicles, multi-disciplinary optimization techniques, and digital scanner technology and software, as well as grid generation techniques based upon algebraic/elliptic multi-block structured methods and unstructured advancing front methods.

ATTACHMENT 10

NASA PROCUREMENT NOTICE PN 89-57

# Procurement Notice

PN 89-57

March 23, 1994

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## PROVIDING FACILITIES TO CONTRACTORS

**PURPOSE:** To provide additional coverage in the NASA FAR Supplement (NFS), Part 18-45, to authorize providing facilities (off-the-shelf, general purpose equipment) to contractors under certain limited conditions.

**BACKGROUND:** FAR 45.302-1 states Government policy that contractors are required to supply all facilities necessary for the performance of Government contracts, unless the contracting situation falls under one of the five enumerated exceptions to that policy. In a review of NASA property practices, the General Accounting Office (GAO) has stated their opinion that NASA has not enforced this policy uniformly and that contractor-held facilities owned by NASA have increased substantially. NASA-owned, contractor-held facilities amounted to over \$1.9 billion in FY 1993.

NASA is committed to reversing the practice of providing facilities to its contractors. However, since NASA now owns large quantities of facilities, a strategy is required to gradually reduce the amount of those facilities made available to contractors. This approach will maximize NASA's return on investment in facilities and avoid a significant short-term impact on NASA contractors. Therefore, where NASA-owned facilities exist to support a function being performed under contract, it may be in NASA's interest to continue to furnish these existing facilities to contractors until the items require replacement. At that time, policy compliance requires that contractors provide replacement items at their expense if the need for the facilities still exists.

**REGULATION:** In section 18-45.302-1, Policy, a new paragraph (c) is added to read as follows:

(c) In addition to the exceptions listed in FAR 45.302-1(a), existing NASA-owned facilities (whether contractor acquired or Government furnished) may be retained for the remainder of the contract period and furnished under any follow-on contract for the same effort if the contracting officer determines that to do so would be in the best interest of the Government, provided that:

- (1) The facilities are required to accomplish the purpose of the contract;
- (2) The resulting contract contains a provision requiring the contractor to replace any of the facilities that reach the end of their useful life during the contract period, or which are beyond economical repair, if the facilities are still needed for contract performance. Such replacements shall be made with contractor-owned facilities. The contract provision shall also expressly prohibit contractor acquisitions of facility items for the Government, unless specifically authorized by the contract or consent has been obtained in writing from the contracting officer pursuant to FAR 45.302-1(a);
- (3) Consideration has been given to any alternative uses by Government personnel within the agency, in consultation with the Industrial Property Officer; and

6. Question: Is it correct to assume that any Contractor estimated direct charge labor hours for management, supervision and administration, and clerical support functions, if proposed by the offeror, are to be in addition to the Governments directed level of effort hours?
- Answer: In accordance with RFP Page 88, Factor 2 - Cost, Paragraph e.(1) and Paragraph e.(8), such hours are in addition to the Government's directed level of effort hours for the Government's Estimated Staffing.
7. Question: When should key personnel be available? Upon the contract award date, at the beginning of the contractual period or any time during the contract transition period? Please specify.
- Answer: The availability of the proposed Key Personnel as of contract effective date will be evaluated under Factor 1, Subfactor 6, Pages 86 and 97. In addition, your proposed plan for initial phase-in and your approach to minimize changeover difficulties and maximize continuity of services to the Government will be evaluated under Factor 1, Subfactor 2 (see Pages 83, 84, 95 and 96).
8. Question: What constitutes the availability of the offeror's personnel? Letters of commitment, employment contracts, only personnel on staff at the time of contract award, please specify.
- Answer: Signed letters of commitment are required from your proposed Key Personnel evidencing their commitment to this procurement at the proposed salary and fringe benefits. See also response to Question 16.
9. Question: How many copies of the proposal are to be submitted?
- Answer: An original and 12 copies of each volume are required. (Standard Form 33, Cover Page and Page 81, L.35, Paragraph A contain this information.)
10. Question: Can you describe the relationship of the LaRC CSCC and this contract? Will space be provided at the LaRC CSCC the tasks?
- Answer: Some CAPSS personnel will work at least part of their time in application laboratories that are considered to be part of the CSCC. Office space and equipment in the CSCC will be provided by LaRC for this purpose; however, the primary office location of all Contractor personnel is to be off-site.

(4) The contracting officer documents the file with a detailed explanation of the circumstances which make furnishing of the facilities in the best interest of the Government.

**REGULATORY COMPLIANCE:** This regulation has been published as an interim rule in the Federal Register.

**EFFECTIVE DATE:** This PN is effective as dated and shall remain in effect until canceled, superseded, or included in the NASA FAR Supplement.

**HEADQUARTERS CONTACT:** Larry G. Pendleton, Jr., Code HK, (202) 358-0487.



Walker Lee Evey  
Director, Procurement Policy Division

**DISTRIBUTION:**  
NFSD List

QUESTIONS AND ANSWERS

The enclosed written answers represent the Government's official response to all questions received.

QUESTIONS AND ANSWERS RELATED TO THE SOLICITATION NO. 1-122-1150.3059, CAPSS

1. Question: What are the expectations of the Space Station Program, with it's changing requirements, relative to its application to LaRC and the CAPSS solicitation?

Answer: Although LaRC supports the Space Station Program with system studies, etc., it does not have a prime responsibility for the Space Station. Relatively little work under the CAPSS contract is expected to relate to this program.

2. Question: Reference I.18, Safety and Health. Is a safety and health plan required and if yes when must it be submitted?

Answer: In accordance with RFP, Page 44, Exhibit A, Paragraph D, the Safety and Health Plan is required within 30 days after contract award.

3. Question: Please advise of the number of security clearances required for this contract, the DD254 cites "a limited number?" The "estimated skill mix" on Page 111 cites only one person. How quickly will secret clearances be needed?

Answer: In accordance with RFP, Page 16, H.5, at the current time one clearance is required. This clearance will be needed by contract effective date.

4. Question: Please provide specific information on the incumbent staff such as current salary, names, current benefits, unique skills applicable to this contract, and archival knowledge about processes.

Answer: The requested information is company proprietary information and thus cannot be furnished.

5. Question: Please clarify the level of effort total hours required to be priced in the proposal and specify the distribution of labor hours to the desired labor categories.

Answer: In accordance with Pages 88-89, L.35, Factor 2 - Cost and Attachments 5 and 6, the offeror must propose for GES effort 450,000 direct labor hours for base effort and 140,625 for the options for additional level of effort. However, the level of effort in B.5 will be the total GES and non-GES direct labor hours.

11. Question: Reference F.3, Place(s) of Performance and L.33, Contractor/ Government Interface. What other off-site facilities will be required? If yes, what will the Contractor's requirements for the off-site facilities be?

Answer: Reference RFP Page 81, L.32, for Contractor's Off-Site Facility Requirements. See also Factor 4, Subfactor 3 (Pages 93 and 98).

12. Question: What will the hours of overtime be used for? When will they be, after hours or on weekends?

Answer: Overtime will be required for various tasks on an as needed basis. It may be required at any time of the week.

13. Question: Reference I.17, NASA SDB Goals.

A. Are there any incentives or advantages for the Contractor to exceed the goal of 8% of the award?

B. Will exceeded the 8% goal be considered an advantage in the evaluation of the proposal?

C. Are there any disadvantages of not meeting the 8%.

Answer: There is no specified minimum SDB goal for this procurement. However, the Government will evaluate the offeror's Small Business and Small Disadvantaged Business Plan in accordance with Factor 4, Subfactor 1. (Pages 92 and 97)

14. Question: Who is the technical point of contact for this solicitation? How can they be contacted?

Answer: In accordance with Page 79, L.27, all communications must be addressed to Carolyn A. Wells.

15. Question: Reference Exhibit C, List of Government Furnished Property. The list appears to list only hardware, will there be Government furnished software? If yes, what will it be, what version is it and what responsibility will the Contractor have to maintain it?

Answer: A number of Government furnished software packages are used on the hardware listed in Exhibit C. A list of these software packages will be provided with the first amendment to the RFP. It is the Contractor's responsibility to obtain maintenance for the software packages.

16. Question: Is there a percentage of the current Contractor's personnel that LaRC would require to be hired by the next Contractor? If not a requirement is there a target percentage?

- Answer: There is no mandatory incumbent retention rate. However, the Government will evaluate under Factor 1, Subfactor 2, each offeror's plans for initial phase-in, minimizing changeover difficulties and maximizing continuity of services to the Government. (See Pages 83, 84, 95 and 96.)
17. Question: Reference L.16, Evaluation of Compensation for Professional Employees. Could you please explain in detail what exactly what a Contractor needs to do to comply with this paragraph.
- Answer: Reference RFP Page 85, Factor 1, Subfactor 4; Page 96, Factor 1, Subfactor 4 and L.16, Page 75.
18. Question: Please describe the type of response that is expected for the technical questions?
- Answer: In accordance with RFP Page 85, Factor 1, Subfactor 5 and Page 96, Factor 1, Subfactor 5, each offeror is to provide written answers to show its understanding of the Statement of Work requirements both from a management and technical standpoint and its approach for meeting these requirements.
19. Question: Please describe how LaRC would like the transition from the current Contractor to the next Contractor to take place.
- Answer: In accordance with Page 83, Factor 1, Subfactor 2, each offeror is to propose their plans for initial phase-in, minimizing changeover difficulties and maximizing continuity of services to the Government.
20. Question: Is there a "bid-library" established that contains the current Contractor's tasks and other information?
- Answer: No.
21. Question: If a university is proposed as a subcontractor to a private concern prime contractor, will NASA permit fee to be paid to the university?
- Answer: It is NASA policy not to pay profit or fee on contracts with educational institutions. This would also apply to subcontracts with educational institutions.
22. Question: In reference to CAPSS, the CBD notice indicated a 60 day proposal preparation period rather than 45 days as cited in the RFP. Considering the advance CBD notice is used by industry to schedule events, personnel, and resources for readiness to produce the best

possible proposal, would NASA LaRC agree to a 15 day extension to June 15, 1994?

Answer: An extension will be granted to June 15, 1994 in Amendment 1.

23. Question: Is the Security Plan a contract document requirement under Exhibit A? If required, does this plan relate only to Contractor (off-site) facility? Is some part of the GFP equipment provided to the Contractor considered to be a "computer system" as defined in L.36? If so, what part? If not considered a "computer system" what is the focus of the reporting requirement?

Answer: In accordance with Page 93, L.36, the Security Plan is required under Exhibit F. It relates to the Contractor's (off-site) facility. Paragraph a of the provision defines "computer system" to include computers; ancillary equipment; software, firmware, and similar procedures . . .," therefore the GFP in Exhibit C is to be included in this plan. In accordance with L.36, the apparently successful offeror shall provide a plan, for Contracting Officer approval prior to award.

24. Question: Is the maintenance and repair provided by Langley . . . for all GFP? (or other Langley Contractors; not charged to the CAPSS Contract).

Answer: It is the responsibility of the Contractor to provide equipment maintenance.

25. Question: Is the upgrade and replacement of GFP separately budgeted and costed by Langley; outside the CAPSS Contract.

Answer: In accordance with the revision to G.2, Government-Provided Property, Paragraph b, it is the Contractors' responsibility to replace equipment on this effort.

26. Question: Page count option specifies:

- 1-inch margins on all sides of page
- Type no smaller than 12 points
- Double-spaced text (no more than 3/lines per inch)
- No more than 12 characters per inch

Recommend alteration of formatting specifications to allow one and a half (1 ½) line spacing. This spacing provides excellent readability, facilitates a reasonable amount of information per page and provides sufficient space for making notes.

- Answer: Double-spaced text is required to permit the evaluators to make notes in their copies of the proposals. The Source Evaluation Committee does not believe that 1-½ spaces is sufficient for this purpose.
27. Comment: The text restriction on figures and charts limits the use of available charting tools and techniques to deliver useful, readable/comprehensive process information.
- Question: Will you restate the requirement to say "readable text" on charts, figures, and tables?
- Answer: In accordance with RFP Page 82, L.35 Paragraph C, Option 2 Based on Page Count, replace the sentence "The text contained on charts, figures, and tables should follow the text formatting guidelines stated above." by "The text contained on charts, figures, and tables shall not exceed the amount of text that would be contained in an equal area under the text formatting guidelines stated above."
28. Question: Using the word count option; what is the acceptable method of counting words on a graphic?
- Answer: It is presumed that the number of words on a graphic would be small enough that they could be counted by hand with little effort.
29. Question: In Section L, L.35, Subsection C, it state "Regardless of the option you choose, the [word count or page] limitation is inclusive of charts, tables, diagrams, captions, and figures, but exclusive of . . ." Under "Option 1 - Based on Word Count," it states "The word-count rules used by any commercial word-processing software package are acceptable" The word processing package we use (Microsoft Word) does not count words in embedded charts and diagrams that are produced using a graphics program, such as MacDraw Pro. Does this mean that charts and diagrams are exempt from the word count limitation?
- Answer: It is presumed that the number of words on a graphic would be small enough that they could be counted by hand with little effort.
30. Question: Can the GEOLAB newsletter be provided to offerors?
- Answer: Information describing GEOLAB and the newsletters written by GEOLAB are available through MOSAIC and use of the Wide World Web. Within MOSAIC, the GEOLAB home page can be found under the Information Systems Division home page which in turn is found under the LaRC home page. For companies that do not have internet access, a hardcopy of the newsletters can be mailed directly to you by contacting Marie Noland by phone at (804) 864-5779 or by E-mail at [m.s.noland@larc.nasa.gov](mailto:m.s.noland@larc.nasa.gov).

COPIES OF PREPROPOSAL CONFERENCE VIEWGRAPHS

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# **CAPSS**

**Computational Analysis and Programming**

**Support Services**

**RFP 1-122-1150.3059**

**Pre-Proposal Conference**

**April 29, 1994**



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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 Carolyn A. Wells, Contract Specialist, (see Section L.27 in the RFP) or, in her absence, Mary Jane Yeager, Assistant Head, Services Contracts Branch.

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# **Source Evaluation Committee Membership**

## **Voting Members:**

**Dr. John N. Shoosmith, Chairman**

**Information Systems Division**

**Robert A. Kudlinski**

**Information Systems Division**

**Patricia A. Kerr**

**Information Systems Division**

## **Non-Voting Members:**

**Jeremy G. Becker-Welts**

**Office of Chief Counsel**

**Randy A. Manning**

**Acquisition Division**

**Jeanne D. Covington**

**Acquisition Division**

**Carolyn A. Wells**

**Acquisition Division**

**Jennifer M. Hubble, Secretary**

**Information Systems Division**

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## **EX-OFFICIO MEMBERS**

**Dr. Frank Allario, ISD**

**Dr. Jules J. Lambiotte, ISD**

**Dr. Frank C. Thames, ISD**

**Mary Jane Yeager, AD**

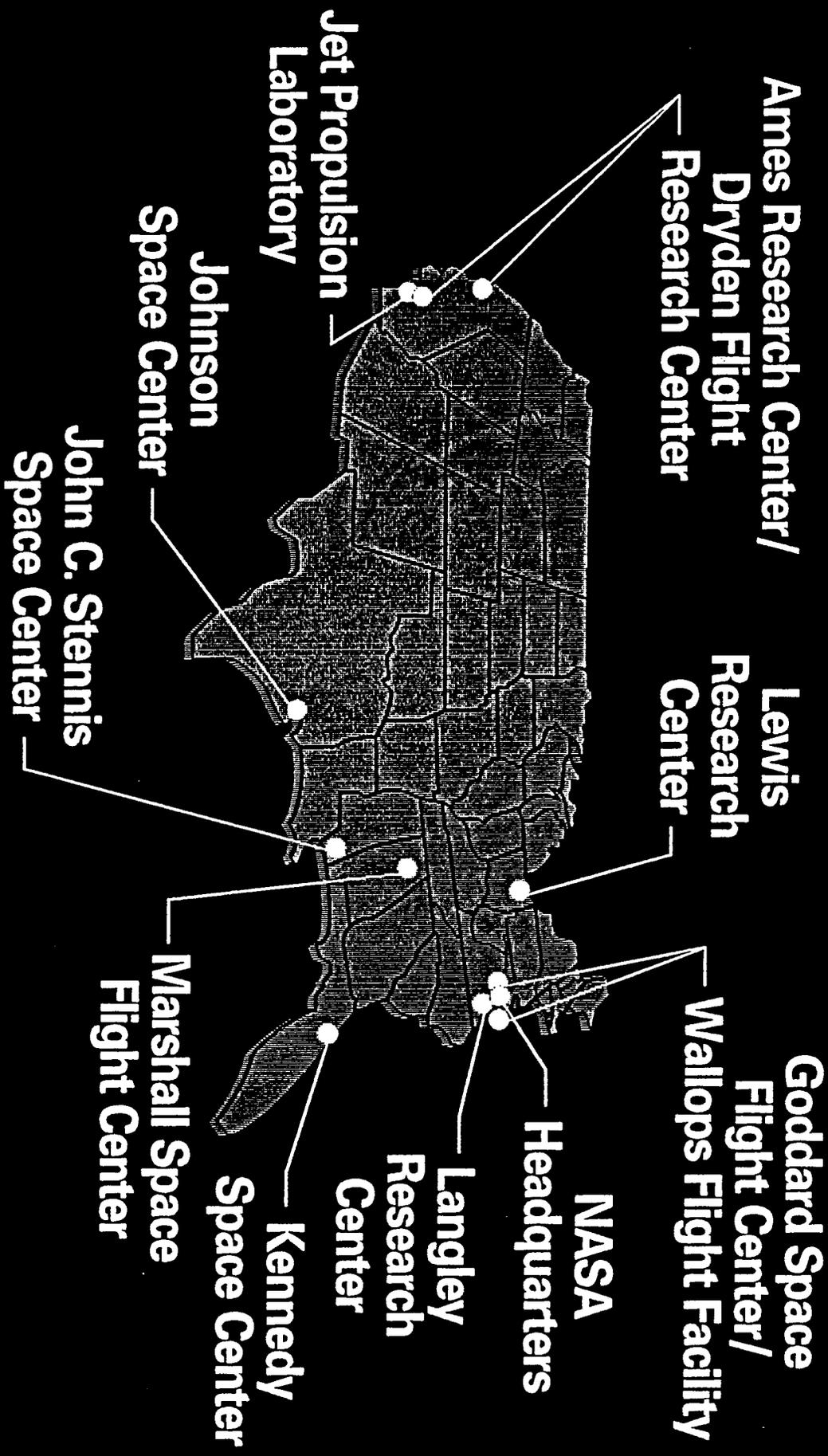
**Samuel A. McPherson, ISD**

**Sandra S. Hense, GSA**

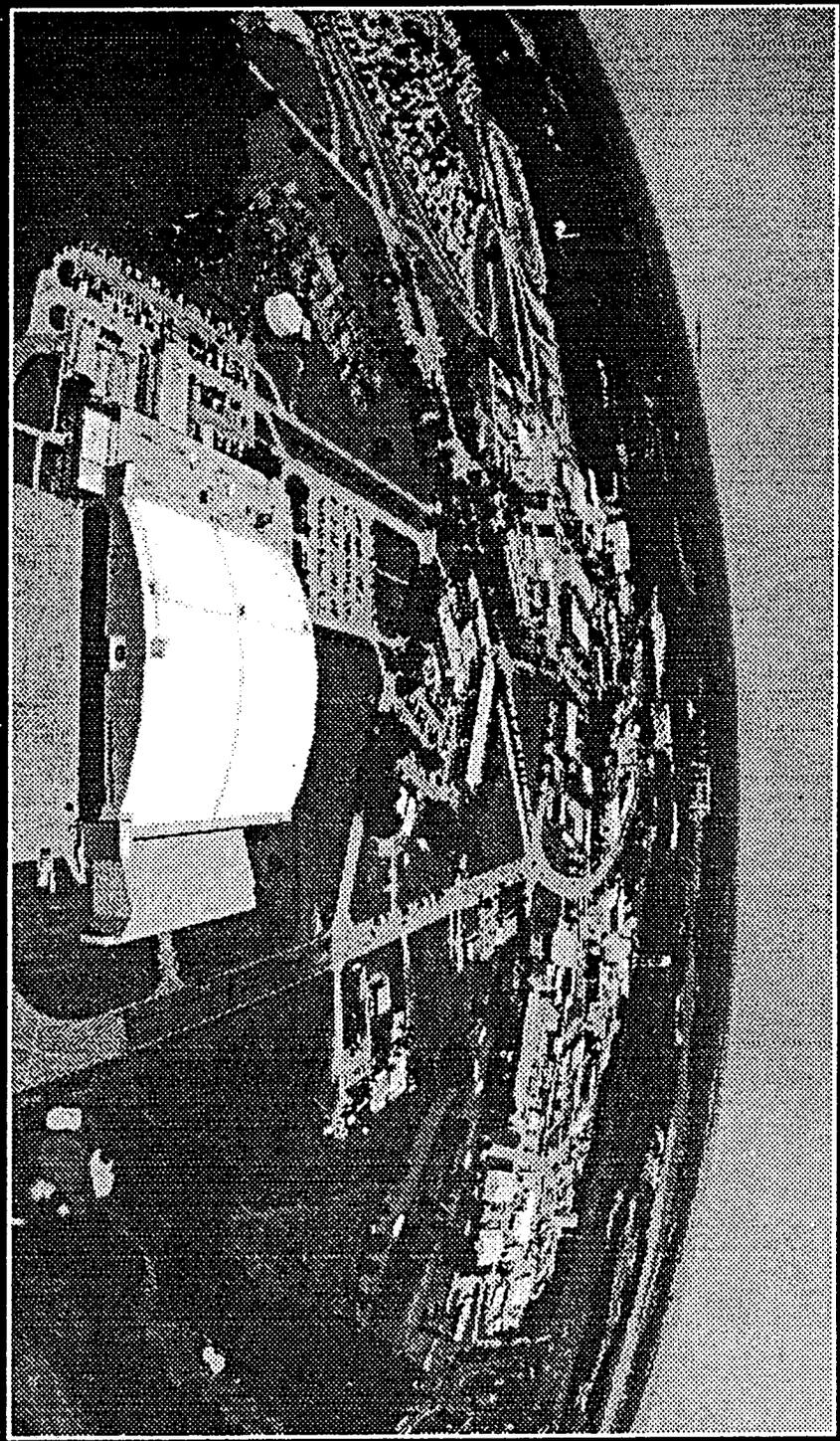
**Dr. James R. Schiess, ISD**

**Patricia J. Phillips, GSA**

# NASA Installations



# NASA Langley Research Center



## Founded in 1917

- First civil aeronautical research laboratory

## Capability

- People: 2946 civil servants
- Facilities: \$1.9 billion replacement value

## Mission: Aeronautics and Space Research

### Aeronautics

- Full range of disciplines
- 60% of resources

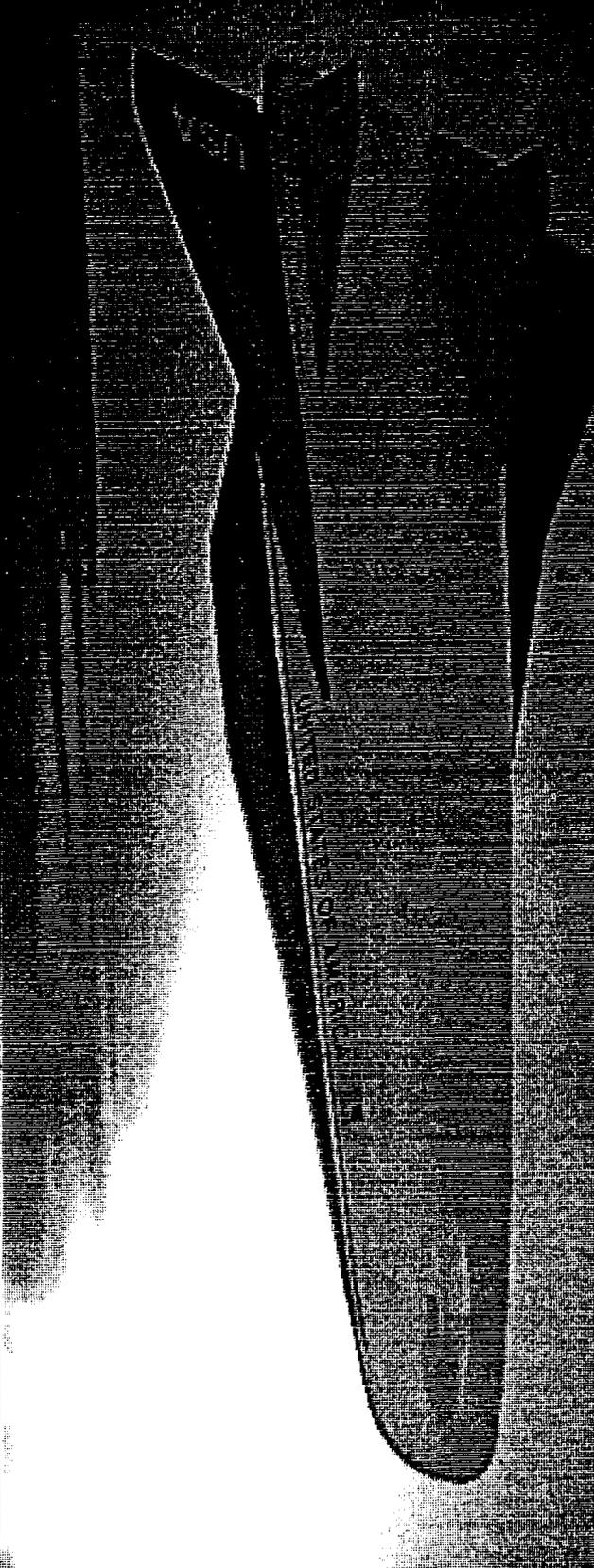
### Space

- Selected disciplines & atmospheric science
- 40% of resources

# Mission

The mission of the NASA Langley Research Center is to:

- Perform innovative aerospace research relevant to national needs
- Transfer technology to users in a timely manner
- Support U.S. government agencies, U.S. industry, NASA Centers, the educational community, and the local community

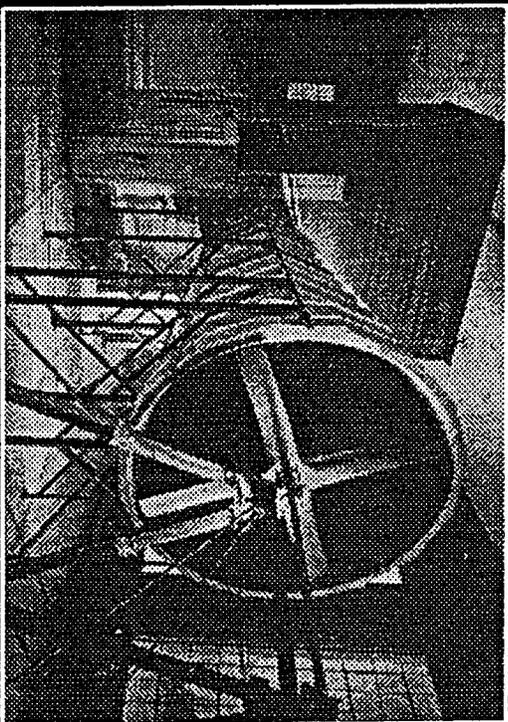


Our success will be measured by the extent to which our research results and technologies contribute to the design, development, and operation of future aerospace vehicles and missions

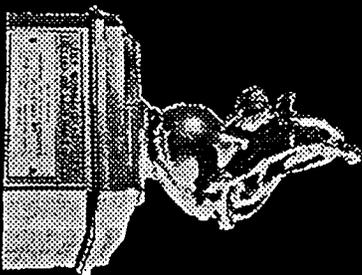
# History of the Langley Memorial Aeronautical Laboratory



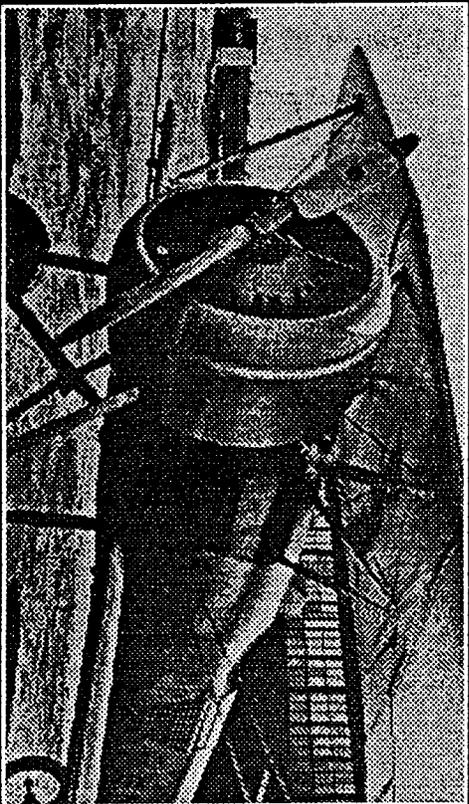
1915 Initial act  
1917 Property acquired



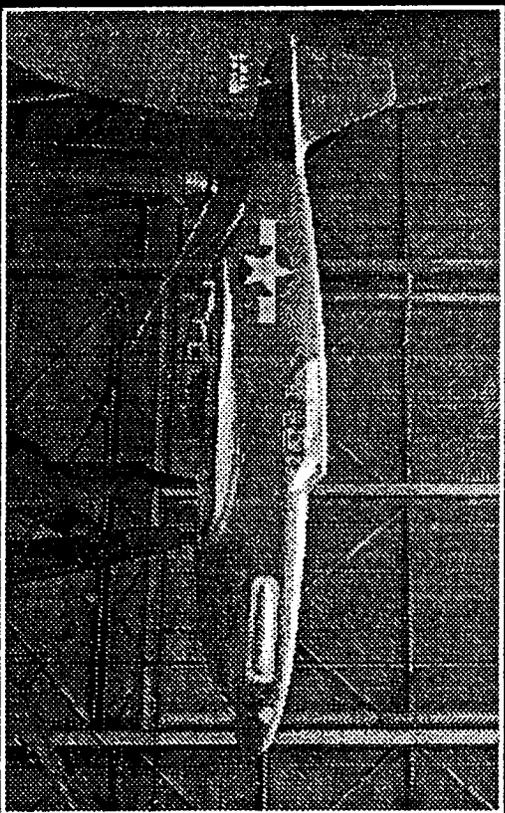
1920 First wind tunnel



Collier Trophy  
Award\*



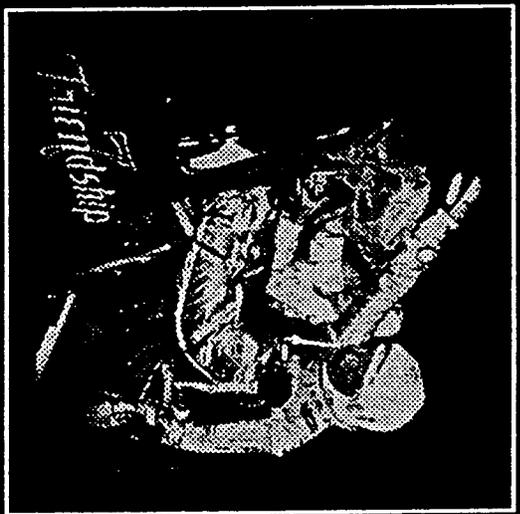
1929\* NACA Cowling



1938-1945 WWII

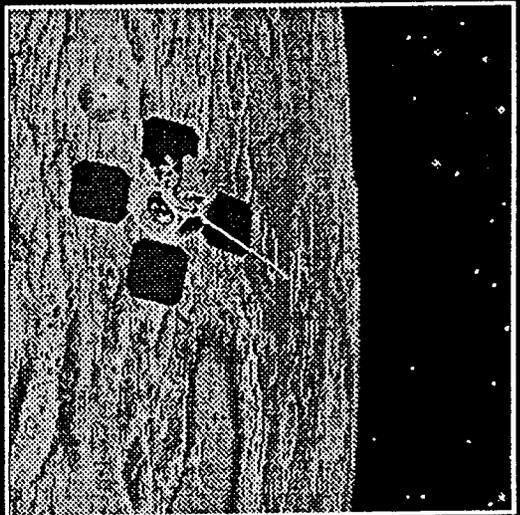
# History of the Langley Research Center

1958



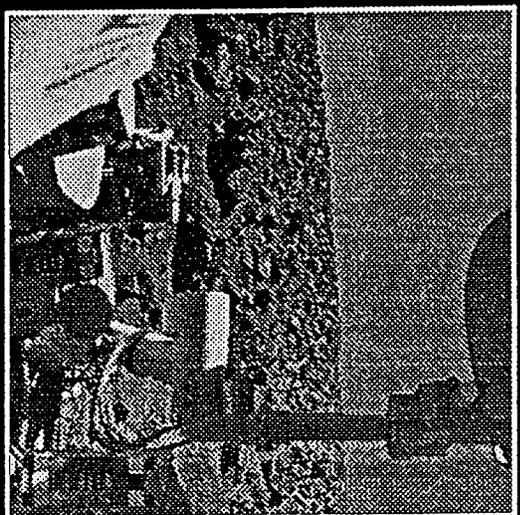
Mercury

1960's

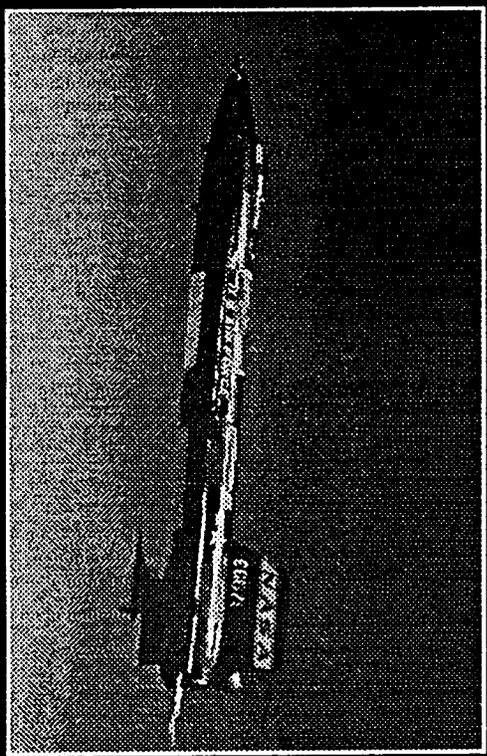


Lunar Orbiter

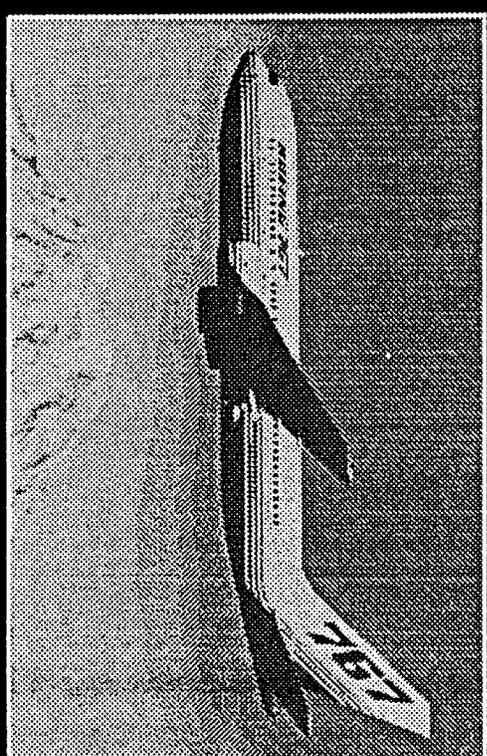
1970's



Viking

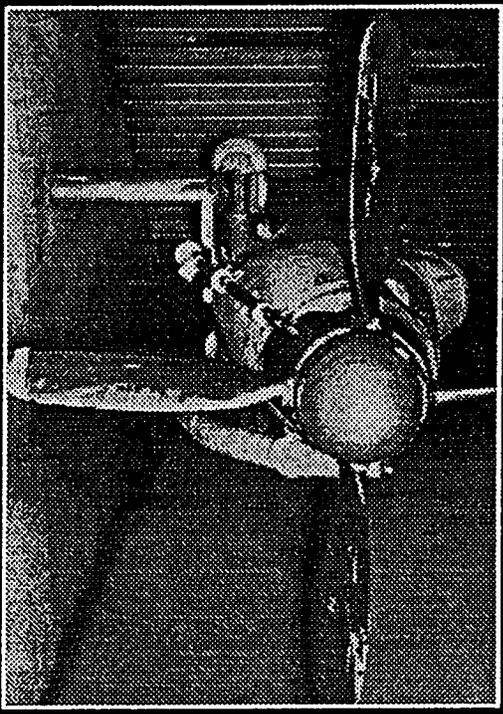


X-15

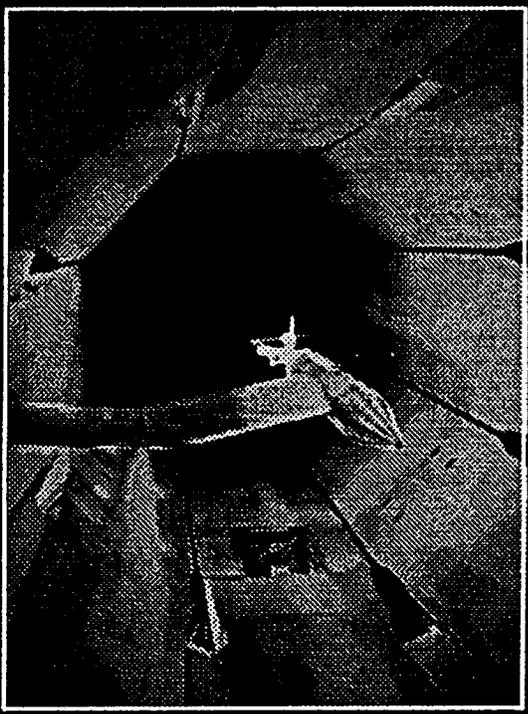


Supercritical Wing

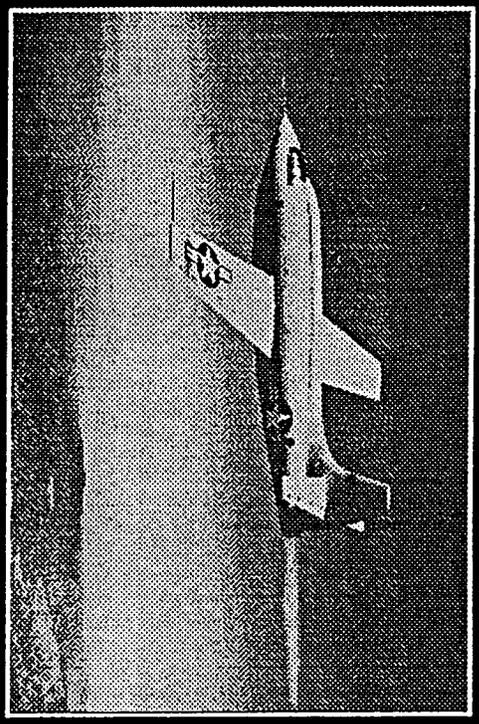
# History of the Langley Memorial Aeronautical Laboratory



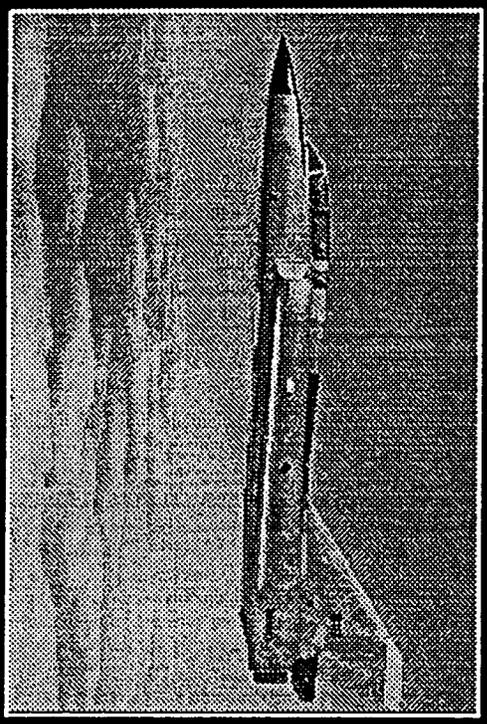
1946\* Aircraft de-icing



1951\* Transonic tunnel



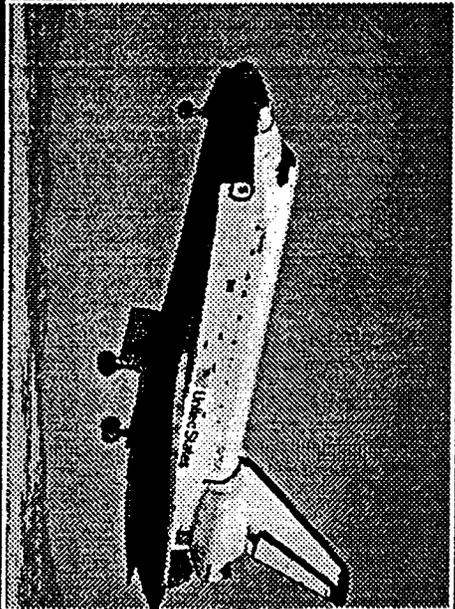
1947\* X-1 Aircraft



1954\* Area rule

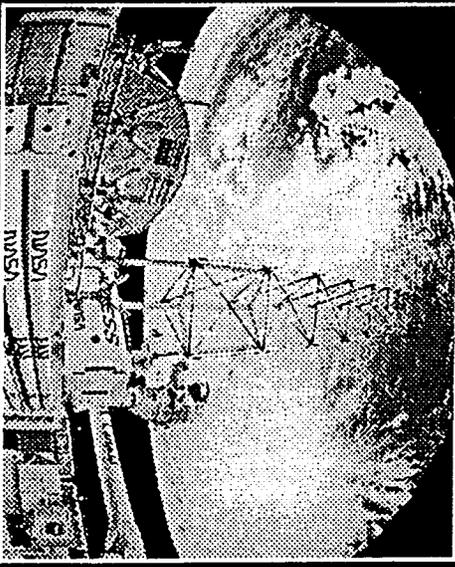
# History of the Langley Research Center

1970's



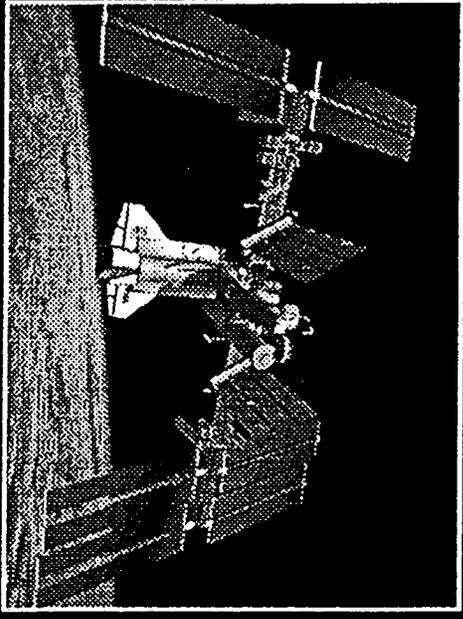
Shuttle

1980's

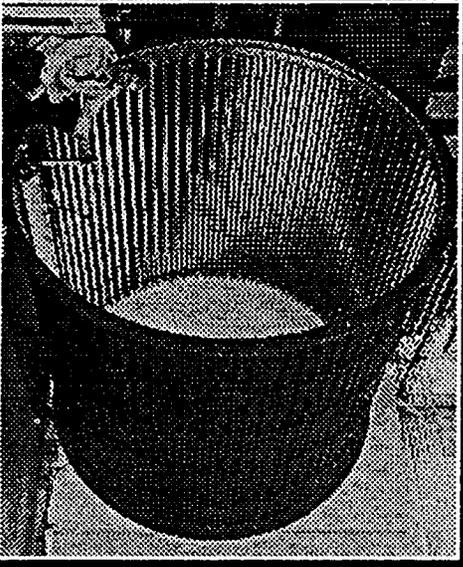


Space Structures

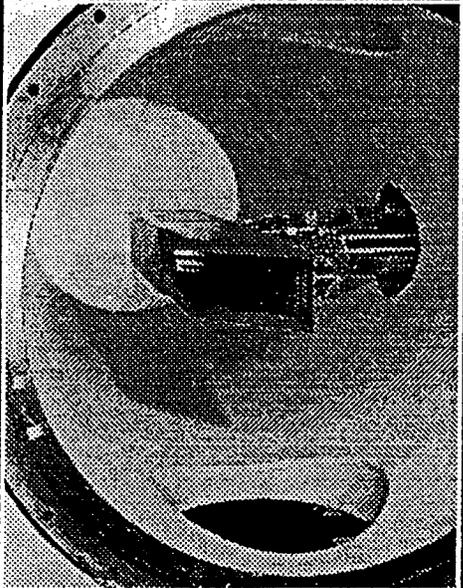
1990's



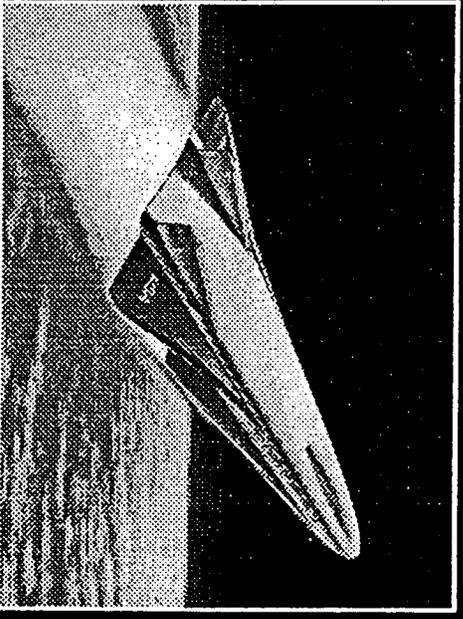
Space Station



Composites

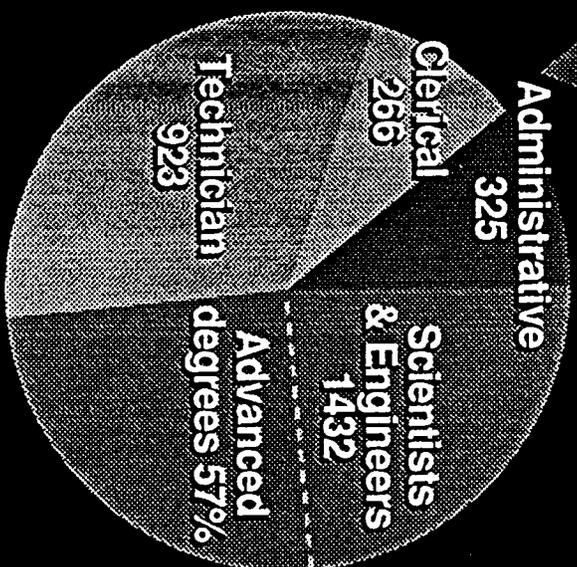
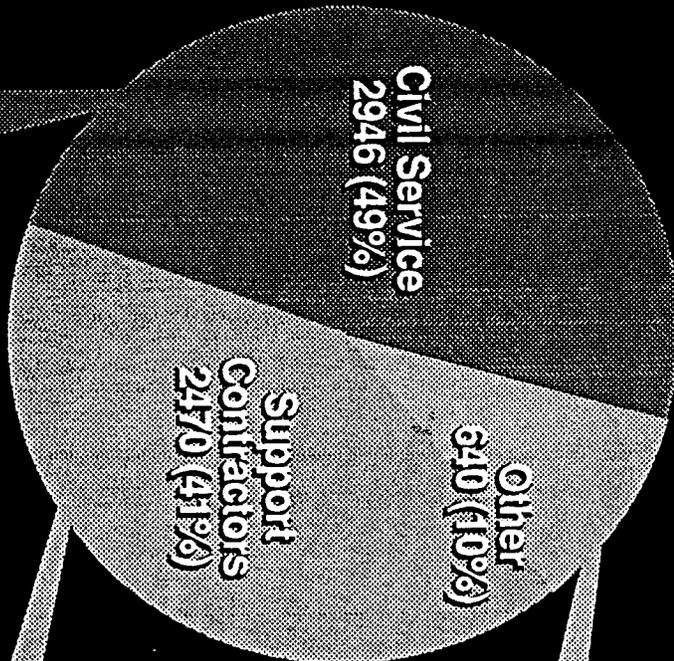


Scramjet



Aero-Space Plane

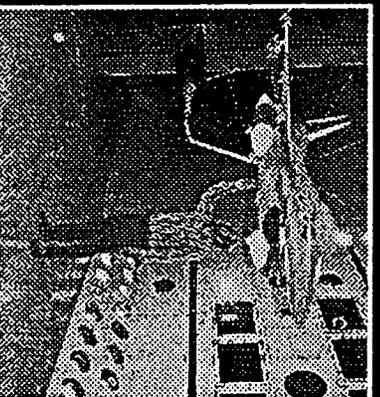
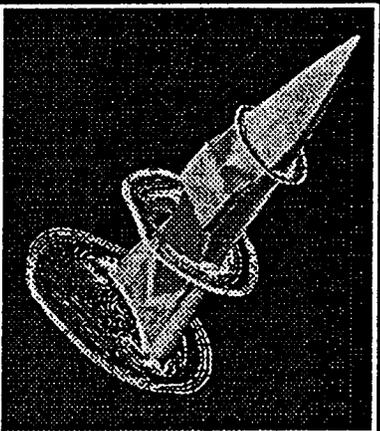
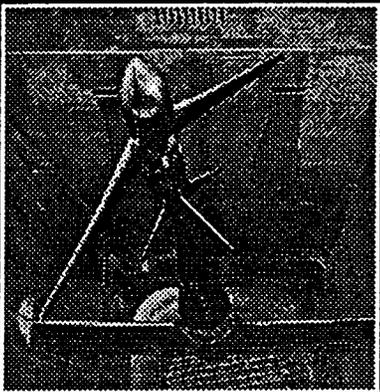
# People at Langley Research Center



University	550
Army	70
Other Government	20

Installation Support	455
ADP	355
Facility Maintenance	470
Instrumentation	245
Model Support	135
R & D	810

# Aeronautical Research Disciplines at LaRC

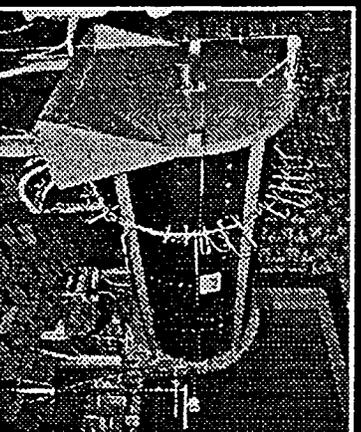
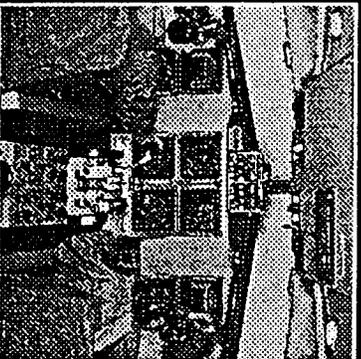
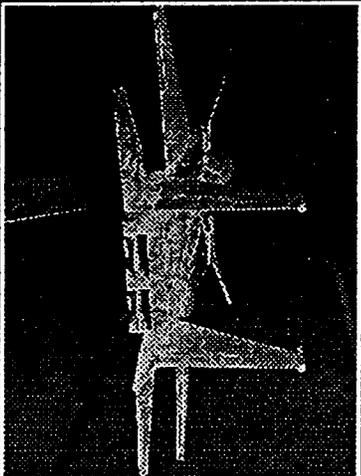


**Aerodynamics**

**Computational  
Fluid Dynamics**

**Materials &  
Structures**

**Aeroelasticity**



**Propulsion  
Integration**

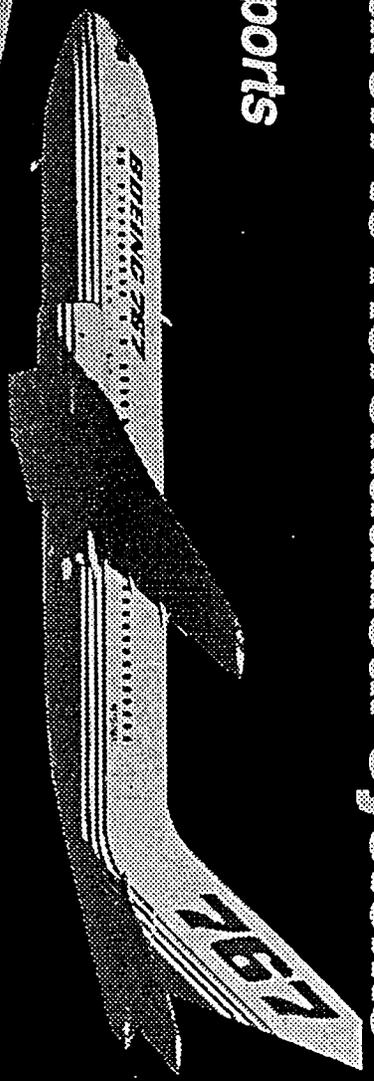
**Controls**

**Flight  
Management**

**Acoustics**

# Application of Research to Aeronautical Systems

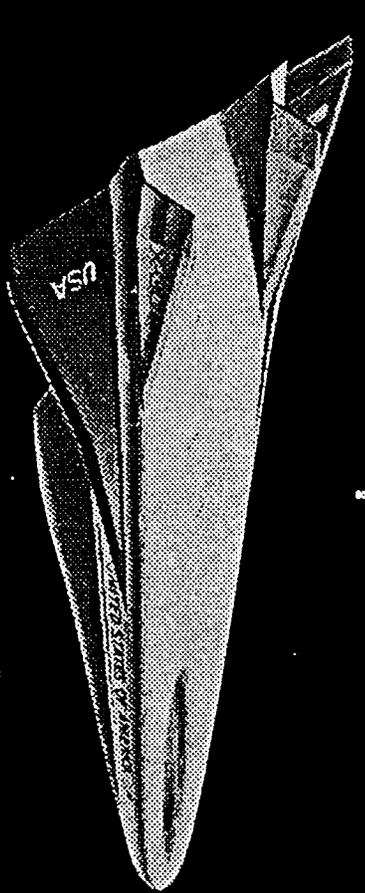
**Transports**



**Subsonic**



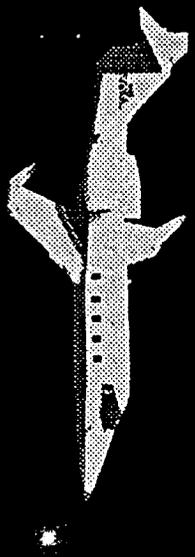
**Supersonic**



**Hypersonic**

**Military**

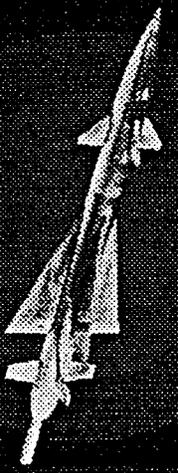
**General Aviation/Commuters**



**Fighters**



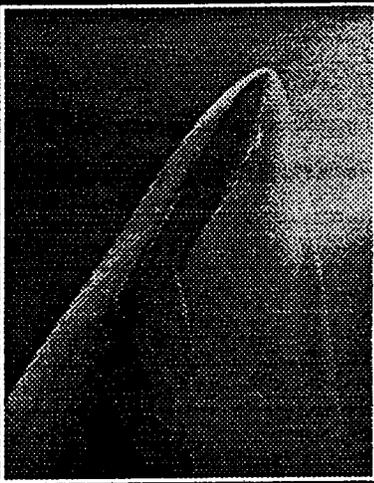
**Bombers**



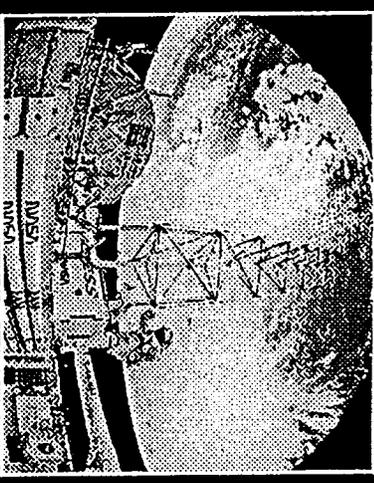
**Missiles**

# Space Research Disciplines at LARC

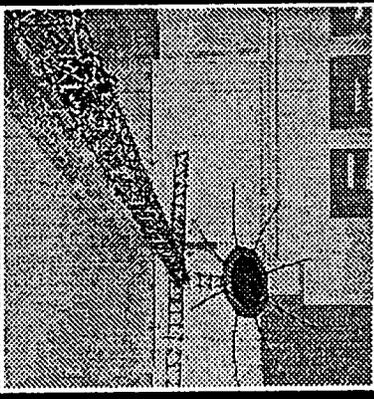
## Space Technology Disciplines



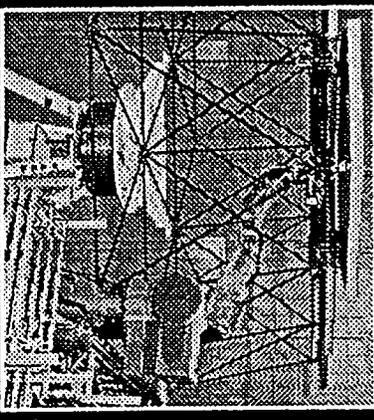
**Aerothermodynamics**



**Structures & Materials**

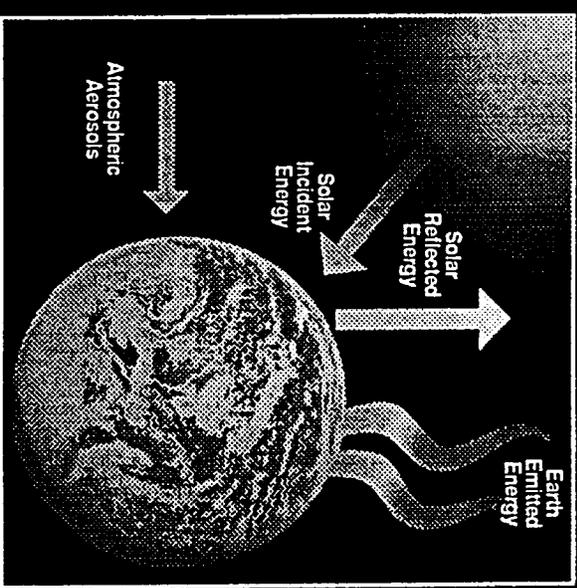


**Controls**

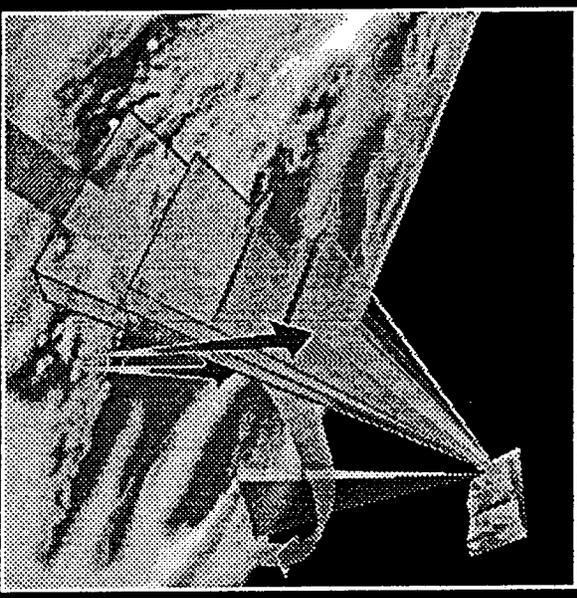


**Robotics**

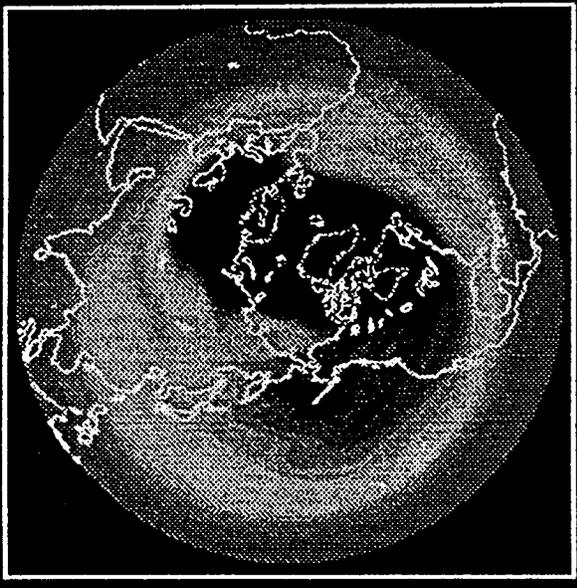
## Atmospheric Sciences



**Radiation Balance**

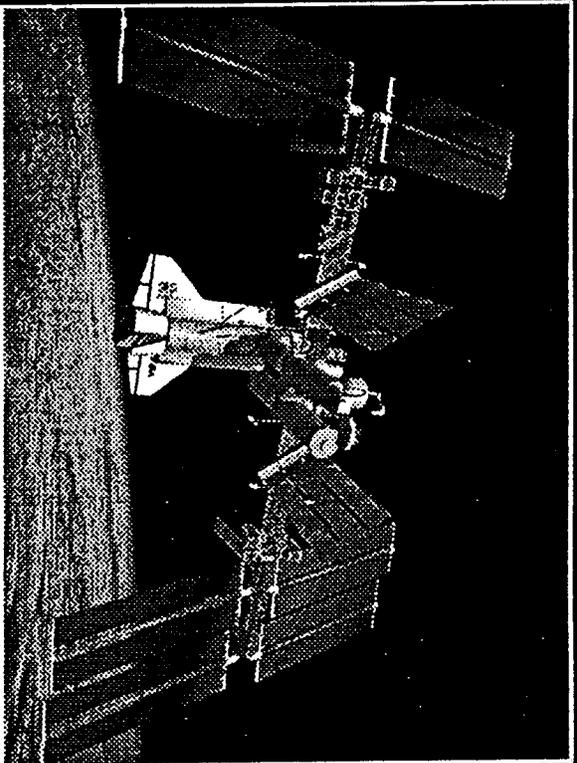


**Atmospheric Sensing**

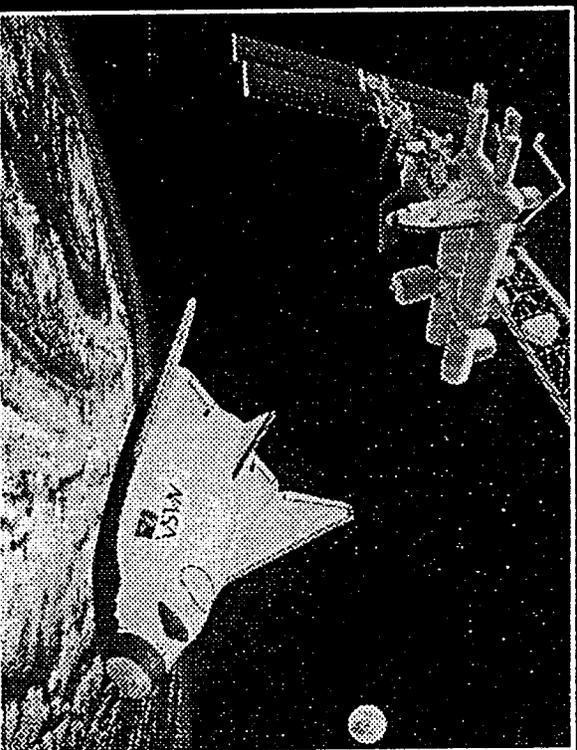


**Theoretical Modeling**

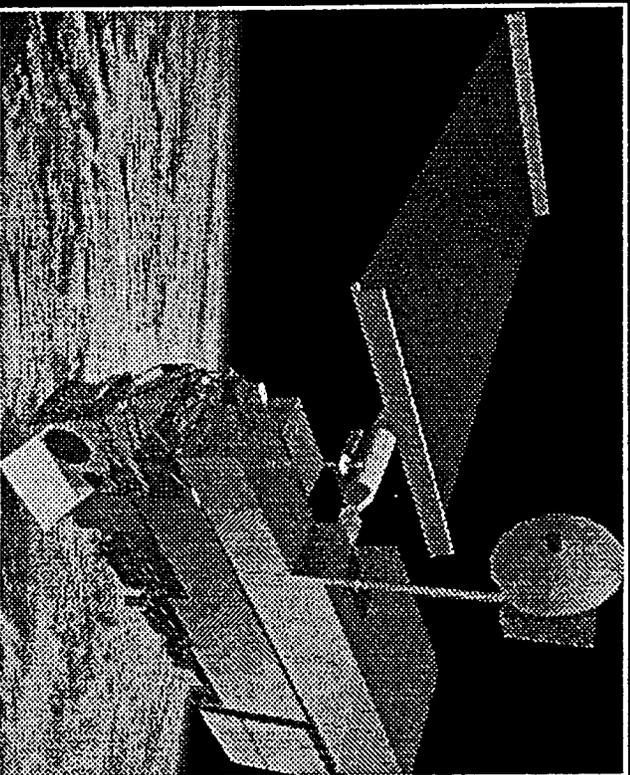
# Application of Research to Space Systems



Space Station



Space Transportation



Space Platform

# Langley Research Center

**Director, Paul F. Holloway**  
**Deputy Director, H. Lee Beach, Jr.**  
**Associate Director, Sidney F. Pauls**  
**Asst. Dir. for Res. & Engr., R. V. Harris, Jr.**  
**Asst. Dir. for Plan., B. H. Adams**

**Chief Engineer**  
**W. M. Piland**

**Chief Scientist**  
**M. F. Card**

**HVO**  
**(Agency Lead)**  
**L. M. Couch**

**HSR**  
**(Agency Lead)**  
**W. R. Hook**

**Aeronautics Program Group**  
**J. F. Creedon**

**Space and Atmospheric Sciences Program Group**  
**D. R. Branscome**

**Research and Technology Group**  
**D. L. Dwoyer**

**Technology Applications Group**  
**C. P. Blankenship**

**Internal Operations Group, K. A. Hesseinius**

**Facilities Engineering and Operations**  
**S. D. Joplin**

**Engineering and Information Systems**  
**R. T. Wingate**

**Administrative Services**  
**J. F. Stokes**

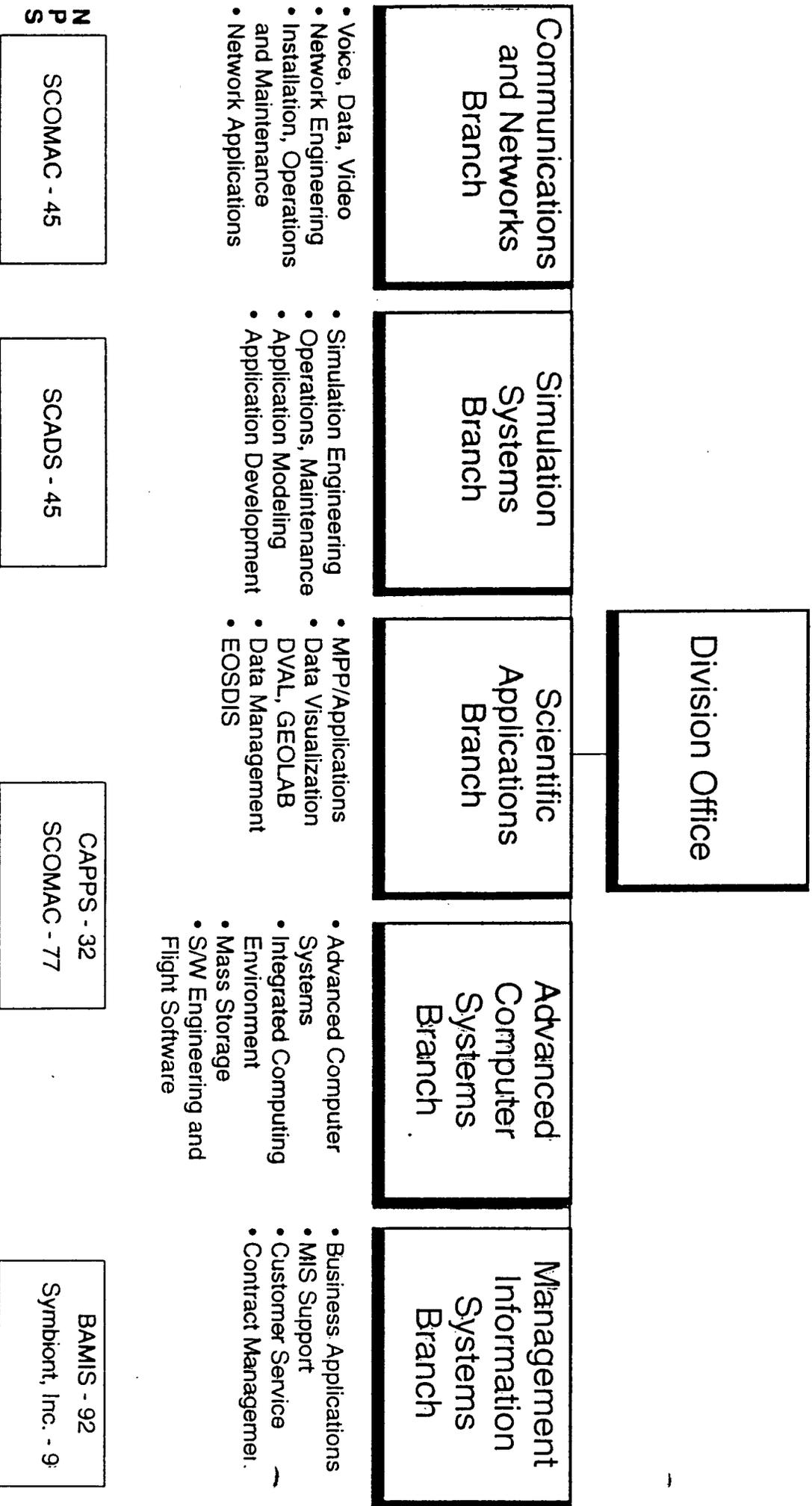
**Comptroller**  
**J. R. Struhar**

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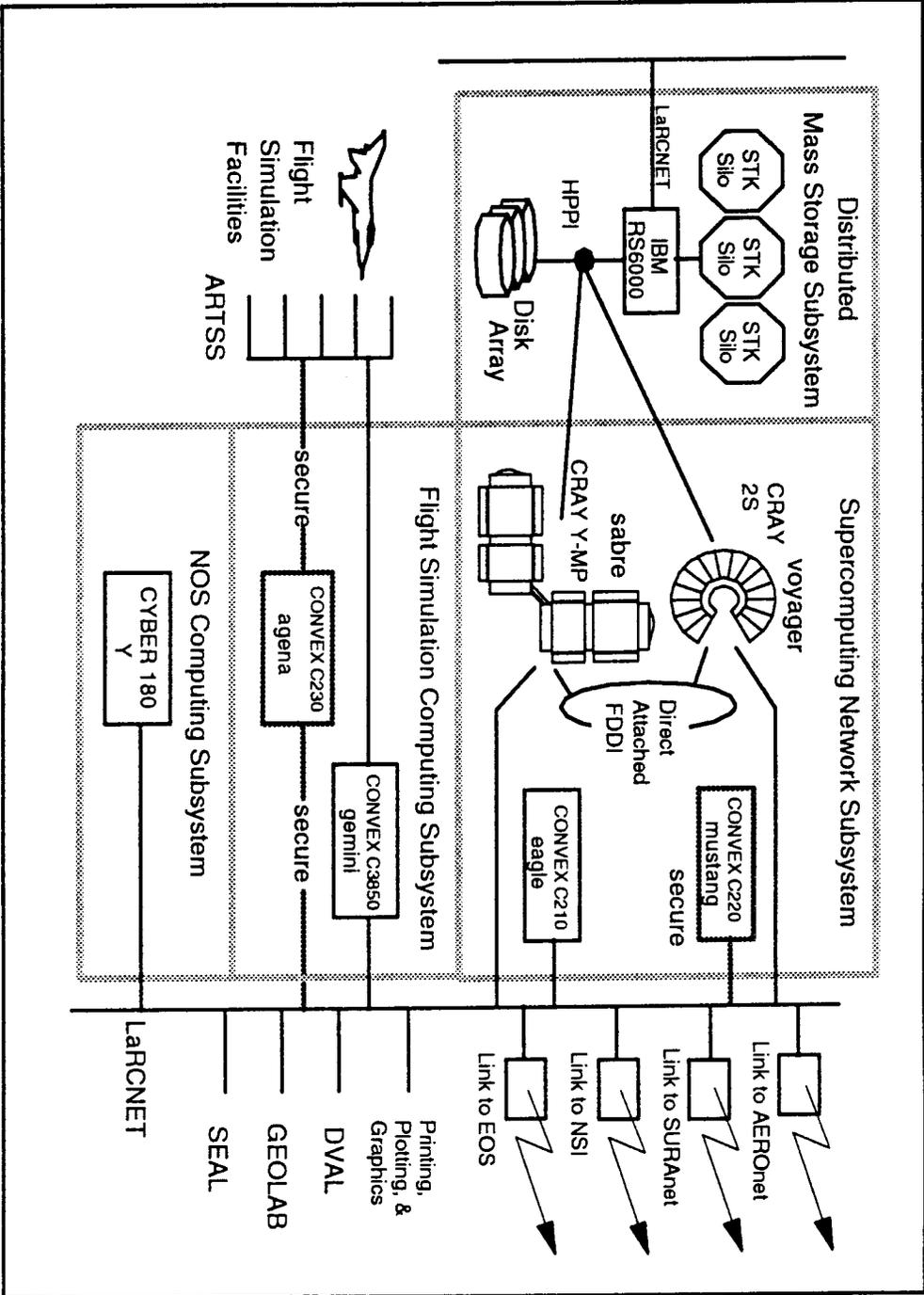
## **INFORMATION SYSTEMS DIVISION**

- **Develop and Manage the Central Scientific Computing Complex (CSCC)**
- **Develop and Manage the Center's Voice, Data, and Video Communications Networks**
- **Develop and Manage the Center's Flight Simulation Facilities**
- **Develop and Manage the Center's Management Information Systems**
- **Provide Computer Applications Support to Center**
- **Provide Distributed Computing Support**

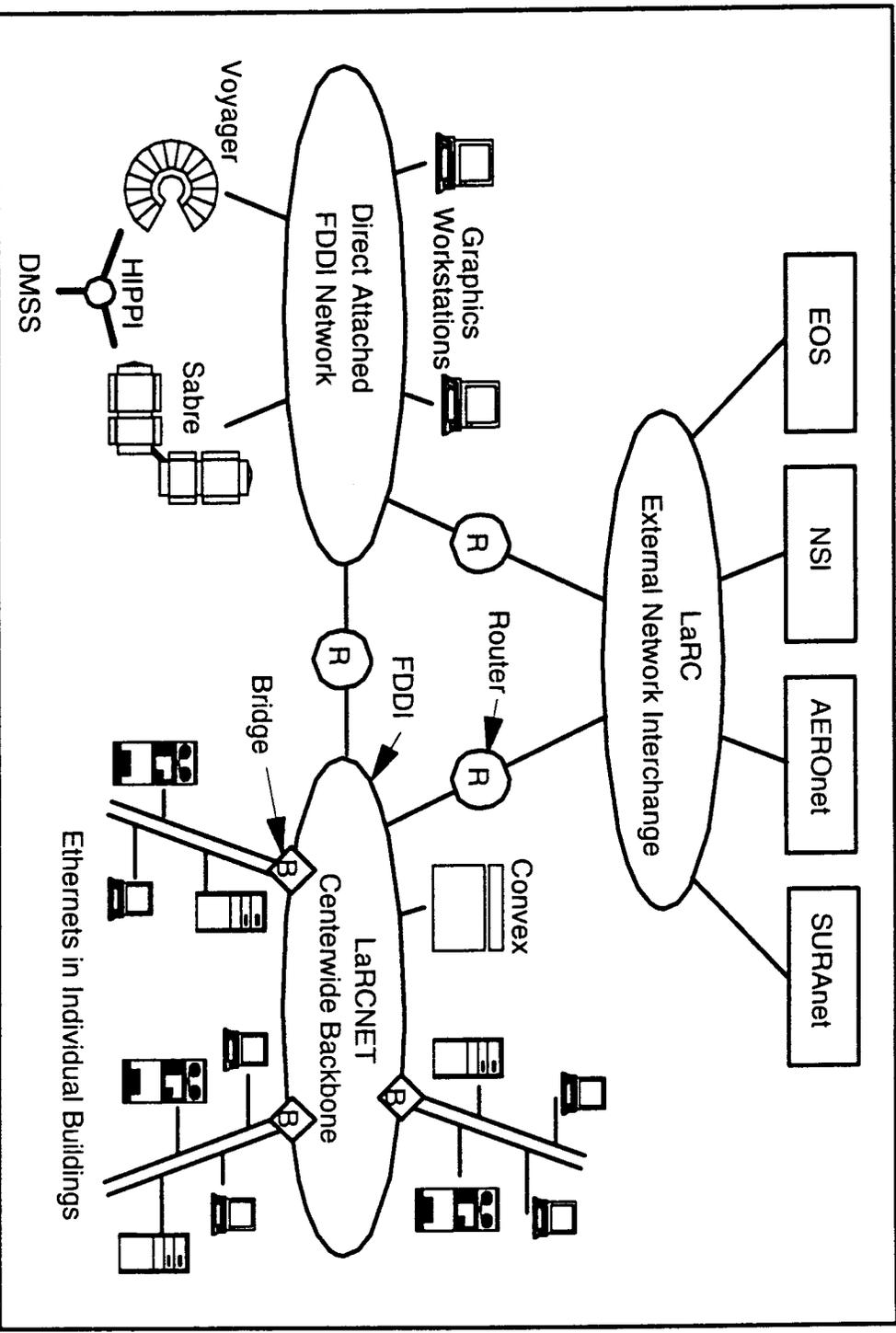
# INFORMATION SYSTEMS DIVISION



N  
P  
S

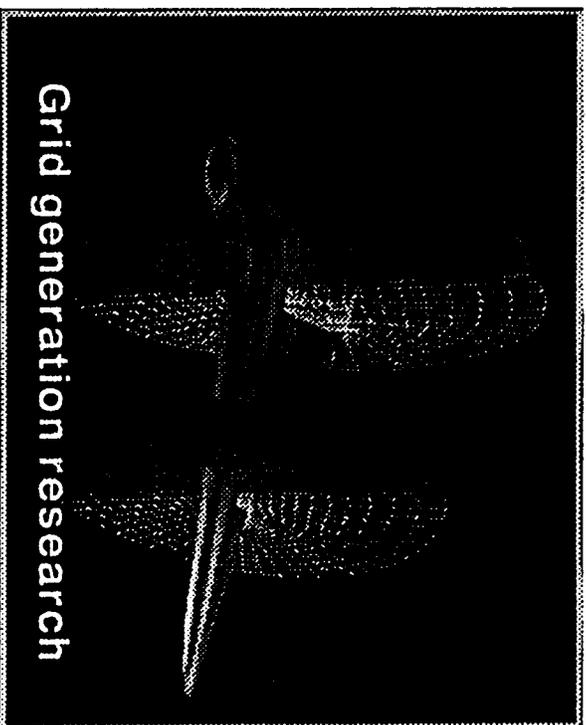


The LaRC Central Scientific Computing Complex



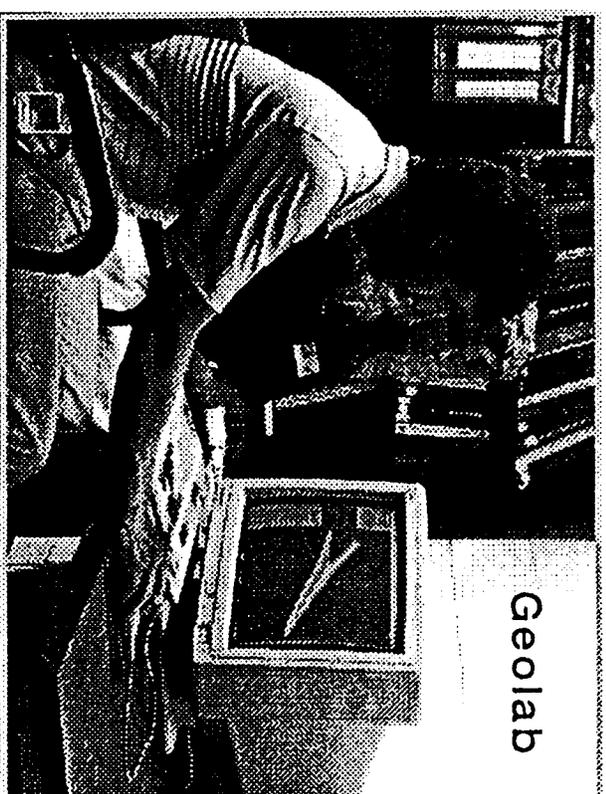
LaRC Computer Network Architecture

# GRID GEOMETRY



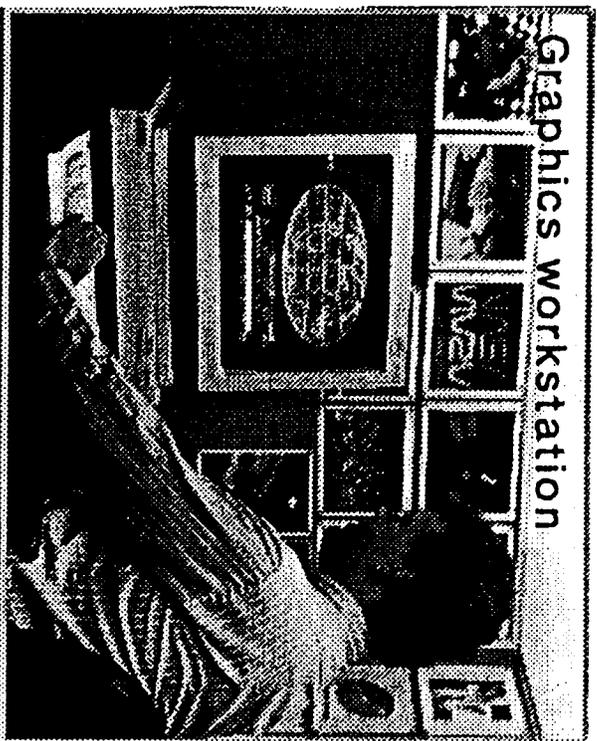
- Research and research support
- Develop software tools
- Maintain codes/database

- Surface representation and smoothing
- Volume grids
- Adaptive techniques



**Geometry research and support for scientific computing applications**

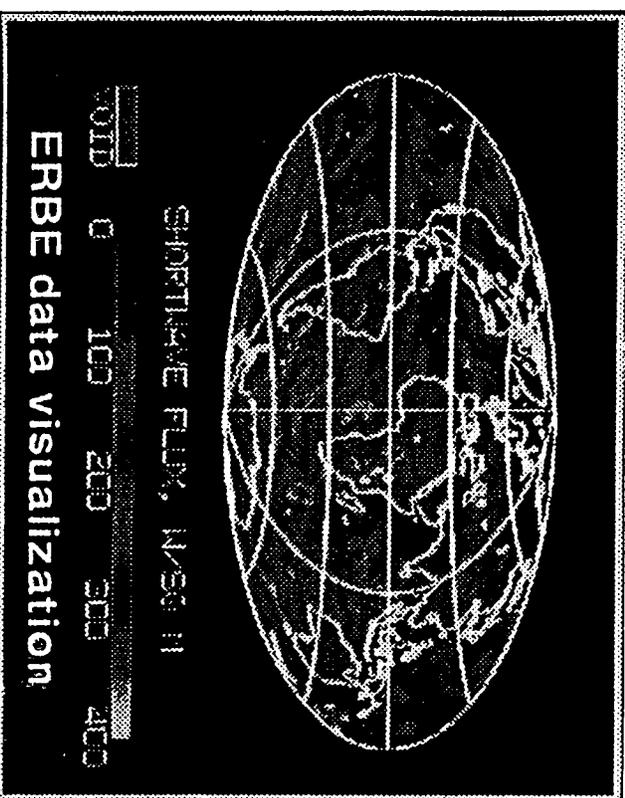
# SCIENTIFIC VISUALIZATION



Graphics workstation

- Computer animation
- Analysis and insight

- Supercomputer graphics
- Workstation applications



Graphics for computational and experimental science

# DIGITAL IMAGE PROCESSING



- Enhanced experimental flow field image
- Improved visual quality for analysis and publication

- Video rate acquisition and processing of video recorded data
- Interactive enhancements

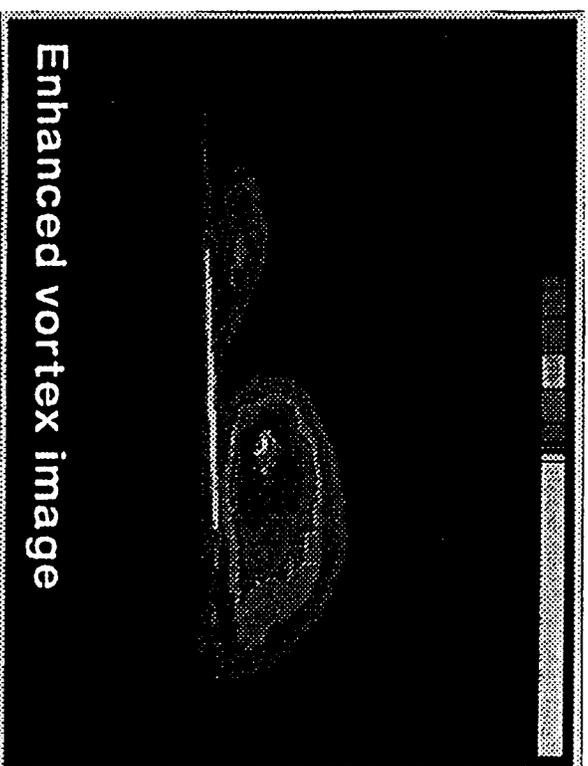
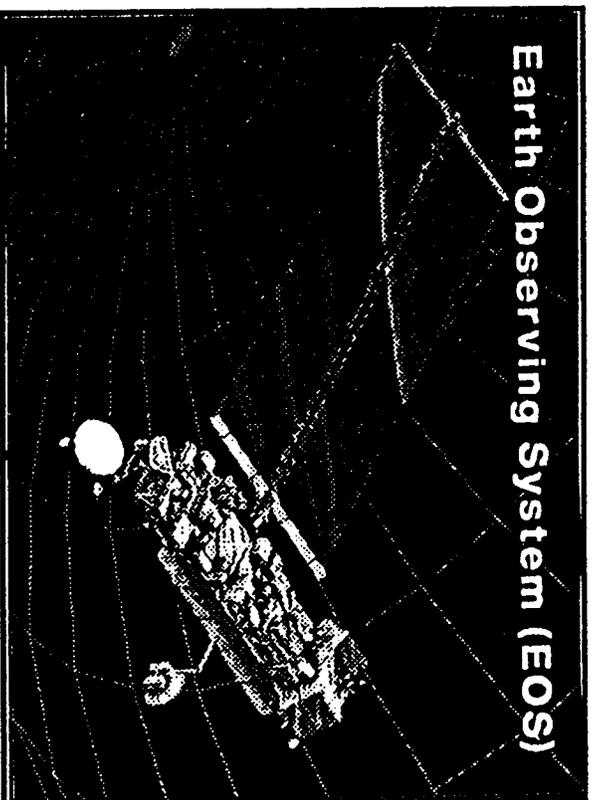
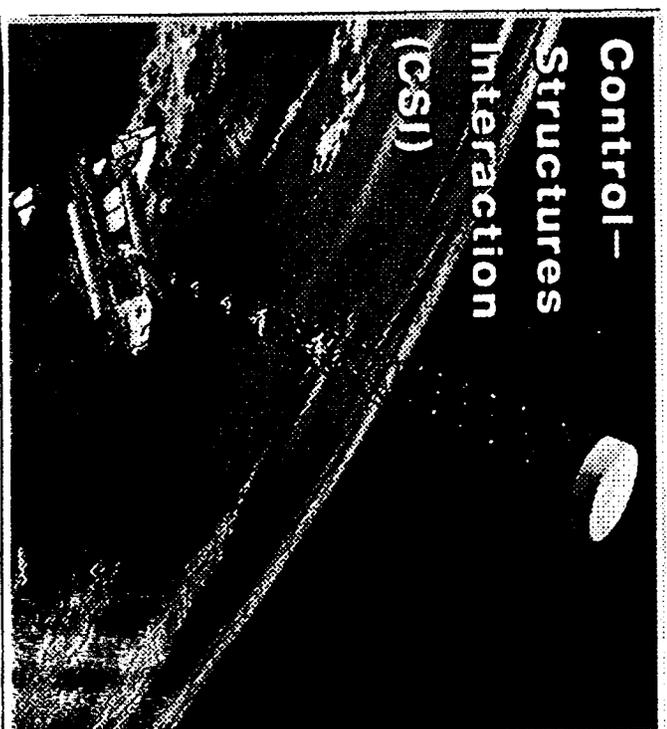


Image processing facility to support LaRC research

# MISSION SOFTWARE DEVELOPMENT



- Real-time embedded control systems
- Modern software engineering methods and tools



- Reusable flight and ground support software modules
- Rapid and cost-effective development of highly reliable software systems

Software Engineering and Ada Lab (SEAL)

---

## STATEMENT OF WORK

### 1. Direct Support to Research and Flight Projects

#### Research Projects

- Mathematical modeling
- Computational methods and algorithms
- Development of computer programs
- Graphical interfaces
- Data management
- Data visualization

---

## **Examples of Work in Support of Research Projects**

- **Develop SILTS (Shuttle Infrared Leaside Temperature Sensing) data storage, retrieval and display software**
- **Flow visualization support for Advanced Tomographic Interferometric Project**
  1. **Refine existing software for reconstructing 2-D image from interferometric tomography (IT) data**
  2. **Do the same for reconstructing 3-D images and develop corresponding display software**
- **Develop model and software simulation of instrument for measuring ice buildup on shuttle surfaces**
- **Develop statistical analysis software for tropical climate data**
- **Develop graphical user interface (GUI) and data management system for framework for interdisciplinary design optimization**

---

## **STATEMENT OF WORK (Cont.)**

### **Flight Projects**

- **Embedded flight software to provide instrument control and data acquisition**
- **Ground computer software to support instrument development, test, calibration, command, and simulation**
- **Programming languages include Ada, Fortran, C, C++, and assembly**

---

# **Example of Work in Support of a Flight Project**

## **Develop software for Lidar In Space Technology Experiment (LITE)**

- **The instrument controller (IC) (an 80186)**
- **The pallet simulator (Interface between IC and multiplexor)**
- **The orbiter simulator (Apple Mac II)**
- **High-rate science computer (IBM PC clone) (a ground based computer for acquiring, archiving, and displaying science data from the orbiter)**
- **Ground based command of LITE instruments**
- **Quick look science computer (two 486's for quick display of received science data)**

---

## STATEMENT OF WORK (Cont.)

### 2. General Purpose Support

#### High Performance Computing

- Facilitate the development, debugging, performance analysis, and optimization of user applications
- Benchmark, test, and evaluate new architectures and software
- Applies to a variety of networked vector and parallel computers and workstations

## **STATEMENT OF WORK (Cont.)**

### **Surface Modeling and Grid Generation** **(GEOmetry LABoratory - GEOLAB)**

- **Surface definitions and numerical grids for CFD, CSM, and other engineering analyses**
- **Analyze and validate computed surfaces and grids**
- **Convert scanned data to surface definitions**
- **Integrate software and provide user interfaces**

## **STATEMENT OF WORK (Cont.)**

### **Data Visualization (Data Visualization and Animation Laboratory - DVAL)**

- **Computer animations and photo-realistic simulations**
- **Enhance and analyze static and dynamic digital images**
- **Digitize negatives, positives, and videos**
- **Multimedia presentations**
- **Integrate software and provide user interfaces**

# STATEMENT OF WORK (Cont.)

## Data Management

- Data modeling, tracking, and presentation
- Methodologies and software tools
- Integrate software and provide user interfaces
- Database administration

# STATEMENT OF WORK (Cont.)

## Software Engineering (Software

### Engineering and Ada Laboratory - SEAL)

- **Develop and continually update process guidebooks**
- **Evaluate and implement new technologies and methods**
- **Select and use Computer Aided Software Engineering (CASE) tools**
- **Collect and analyze process and product metrics to improve system reliability and performance**
- **Operate and administer the SEAL environment**
- **Implement and operate emulators, logic analysers and other real-time embedded system tools**

# STATEMENT OF WORK (Cont.)

## Mathematical Software

- Develop and implement state-of-the-art numerical algorithms
- Install and test mathematical libraries

## Training

- Develop training courses and associated documentation for computer users
- Assist in preparation and updating of teaching materials and methods
- Conduct and administer courses

# ACQUISITION OVERVIEW

# ACQUISITION OVERVIEW

REQUIREMENT: COMPUTATIONAL ANALYSIS AND  
PROGRAMMING SUPPORT SERVICES  
(CAPSS)

CONTRACT TYPE: COST-PLUS-FIXED-FEE (CPFF)

PERIOD OF PERFORMANCE (POP):  
INITIAL 12-MONTH PERIOD OF PERFORMANCE BEGINNING  
JANUARY 1, 1995 WITH FOUR 12-MONTH OPTION PERIODS.

LEVEL-OF-EFFORT (LOE):  
THERE ARE 90,000 HOURS IN EACH PERIOD. ALSO  
INCLUDED ARE ADDITIONAL LOE OPTION HOURS WITHIN  
EACH PERIOD.

MAXIMUM PERIOD OF PERFORMANCE: 60 MONTHS

CAPSS

# EVALUATION FACTORS

	<u>WEIGHTS</u>
Factor 1 Mission Suitability	
• Organization	15%
• Phase-in and Initial Staffing Plan	10%
• Continuing Personnel Management Plan	15%
• Total Compensation Plan	15%
• Operations Plan	25%
• Qualifications and Availability of Key Personnel	<u>20%</u>
Factor 2 Cost	<u>100%</u>
Factor 3 Relevant Experience and Past Performance	
Factor 4 Other Considerations	
• Subcontracting Plan for Small Business and Small Disadvantaged Business	
• Financial Condition and Capability	
• Facility	
• Contract Terms and Conditions	

CAPSS

## RELATIVE IMPORTANCE OF EVALUATION FACTORS

- 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 option for the additional level-of-effort may be considered of less significance than the costs for the five year base effort (including phase-in).

CAPSS

# PROPOSAL PREPARATION INSTRUCTIONS

- ARRANGE PROPOSAL IN SEQUENCE, FORMAT AND CONTENT CONSISTENT WITH ARRANGEMENT OF FACTORS AND ASSOCIATED SUBFACTORS SET FORTH IN ARTICLE M.3 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 WHAT IS IMPLIED.
- ENSURE CONSISTENCY BETWEEN YOUR COST PROPOSAL AND MISSION SUITABILITY PROPOSAL. DISCREPANCIES MAY BE VIEWED AS A LACK OF UNDERSTANDING.

CAPSS

**PROPOSAL PREPARATION INSTRUCTIONS (CONTINUED)**

**COST**

**Offerors and major subcontractors are required to submit:**

- Fully executed and supported SF 1411 and all cost forms**
- Cost data on floppy diskettes, 2 copies, formatted under MS DOS containing self-calculating spreadsheets (It is recommended that you request a Government-provided diskette)**

**REFER TO PAGES 86 through 92 FOR DETAILED INFORMATION.**

**CAPSS**

**PROPOSAL PREPARATION INSTRUCTIONS (CONTINUED)**

**PROPOSAL SUBMISSION: (REFERENCE L-35, PAGE 81)**

**DUE DATE: CLOSE OF BUSINESS  
(4:00 P.M.) JUNE 15, 1994**

**PLACE: NASA LANGLEY RESEARCH CENTER  
9A LANGLEY BLVD.  
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: CAROLYN A. WELLS  
(804) 864-2529  
FAX: (804) 864-7709**

**CAPSS**

**SOLICITATION CHANGES**

**SIC CODE 7376**

**Effective April 22, 1994, the small business size standard is \$18,000,000**

**CAPSS**

## **SOLICITATION CHANGES**

### **GOVERNMENT-PROVIDED PROPERTY**

- **Change in NASA policy as set forth in NASA Procurement Notice 89-57**
- **The Government will provide the Government-Furnished Property listed in Exhibit C. of the RFP**
- **G-2 of the RFP will be revised to specify that the Contractor will replace with Contractor-owned facilities any item that reaches the end of its useful life or is beyond economical repair during the contract period.**
- **Acquisition of facility items for the Government is expressly prohibited unless specifically authorized by the contract or consent has been obtained in writing from the Contracting Officer pursuant to FAR 45.302-1(a)**

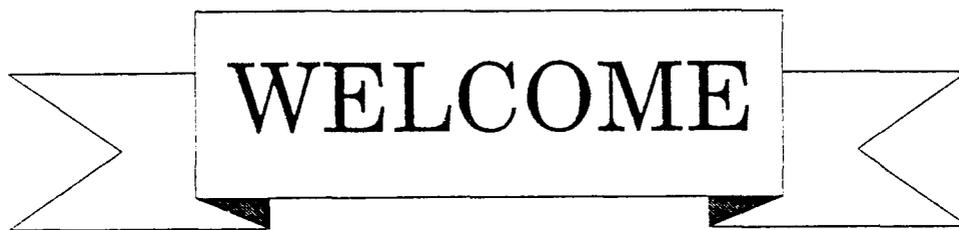
**CAPSS**

# SOURCE EVALUATION COMMITTEE SCHEDULE

Presolicitation Conference	11/02/93
RFP Issuance	4/15/94
Preproposal Conference	4/29/94
Proposals Due	6/15/94
Selection	9/01/94
Negotiation	11/12/94
Award	12/10/94
Contract Start	1/01/95

CAPSS

PREPROPOSAL CONFERENCE ATTENDEE LIST



## PLEASE SIGN IN

### COMPUTATIONAL ANALYSIS AND PROGRAMMING SUPPORT SERVICES (CAPSS)

### PREPROPOSAL CONFERENCE

APRIL 29, 1994

NAME/PHONE NO.	COMPANY NAME/ADDRESS
<u>Tom Kupp</u> <u>(415) 604-6017</u>	<u>STERLING SOFTWARE</u> <u>1121 San Antonio Rd</u> <u>Palo Alto CA</u> <u>94303</u>
<u>TOM RICHARDS</u> <u>415 964-9900</u>	<u>Sterling Software</u> <u>1121 San Antonio Rd</u> <u>Palo Alto CA</u> <u>94303</u>

# PLEASE SIGN IN

## NAME/PHONE NO.

## COMPANY NAME/ADDRESS

Joseph H. Morrison  
804 865-7043

AS AM  
107 Research Dr.  
Hampton VA 23666

R WOLTZ

COMPUTEK  
2877 GUARDIAN LN  
VB, VA 23452

B. WITHEM

COMPUTEL  
2877 GUARDIAN LN  
VB, VA 23452

J. CLARK

COMPUTEK  
2877 GUARDIAN LN  
VB, VA 23452

L CHAMBERLAIN

UNIVIS  
8005 RESEARCH DR  
MILPITAS CA 95021

Mike JORDAN  
408 745-6345  
804 858-5641

MANTECH/MSI  
155A Moffett Park Dr  
Sunnyvale CA 94087

# PLEASE SIGN IN

## NAME/PHONE NO.

JOHN GRAYBEAL  
415-604-964-9900

Maggie Smith  
804-873-8660

Winston C. Clinebat  
805-1725

Pat Stevens  
804 883 4415

Bob Morrison  
(800) 855-0700

RICHARD WHITE  
(804) 864-1147

## COMPANY NAME/ADDRESS

Sterling Software  
1121 San Antonio Rd.  
Palo Alto, CA.

Seymour, Inc.  
475 Blue Crab Rd.  
N. New, VA.

Computer Sciences Corp.  
3217 N. Amistead Ave.  
Hampton, VA 23666

Old Dominion University  
Langston Blvd  
Dorset VA

Grumman Technical Services  
Enterprise Flight Suite 215  
Hampton  
Virginia 23666

VIGYAN, Inc.  
30 Reseach. Dr.  
Hampton VA 23666

# PLEASE SIGN IN

NAME/PHONE NO.

COMPANY NAME/ADDRESS

HENRY J. CLARKS  
301/220-7124

OAD CORPORATION  
2500 GREATWAY CENTER DR  
GREATBELT MD 20770-3508

Bill ROGERS  
301-220-712

SAME

Elaine Daughlin  
703 641-2539

CSC

Lee R. Nichols  
713-335-5144

KORAL - Federal Systems  
Marina Plaza, Suite 500  
2450 South Shore Blvd  
League City, TX 77573

HILL PRICK  
804 632-44 -

OLD DOMINION UNIVERSITY  
NOVA VA

BOB SILVERMAN  
804 825-0700

GERMANN TECHNICAL Svcs  
1 ENTERPRISE PKY  
SUITE 215  
HAMPTON VA 23666-5845

# PLEASE SIGN IN

## NAME/PHONE NO.

GREGORY BOESHAAR  
804-865-1894

TIM BEUSCH  
(301) 345-2007 x136

BRIAN SWANSON  
(703) 603-5861

Bill Barry  
(703) 538-7295

Rh Barlow  
415-284-0750

Kris Burt  
804-825-0001

## COMPANY NAME/ADDRESS

SCIENCE AND TECHNOLOGY CORP  
101 RESEARCH DR  
HAMPTON, VA 23666

INFORMATICS Inc.  
7501 Greenway Ctr Dr.  
Suite 700  
Greenbelt MD 20770

TRW  
ONE FEDERAL SYSTEMS PARK DR FPI/6133  
FIRSTX VA 22033

CSC  
6565 Arlington Blvd  
Fall Church, VA 22042

Sproun/Spiel  
1524 Kather Lane  
Lee Acker, VA 44034

SAIC / Suite 250  
one Enterprise Pkwy  
Hampton, VA 23666

# PLEASE SIGN IN

## NAME/PHONE NO.

Mike Neely

(301) 816-1493

Carol Tolson

804 877-4888

Tracy Anselmo

(804) 877-4884

ERIC P. WHITTETON

(804) 486-5889

## COMPANY NAME/ADDRESS

CTA INCORPORATED

6116 EXECUTIVE BLVD SUITE 800

ROCKVILLE, MD 20852

SAIC

ONE ENTERPRISE PKWY

HAMPTON VA 23066

SUITE 250

SAIC

ONE ENTERPRISE PKWY SUITE 250

HAMPTON VA 23066

INTECS INTERNATIONAL INC

509 VIKING DR., SUITE I

VA BEACH, VA 23452

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

CONTRACT ID CODE

PAGE OF PA

1 2

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		7. ADMINISTERED BY (If other than Item 6)	

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  TO ALL CONCERNED	(#)	9A. AMENDMENT OF SOLICITATION NO. 1-122-1150.3059
	X	9B. DATED (SEE ITEM 11) 4/15/94
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not tended.

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 \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT 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.

(#)	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 or 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 1-122-1150.3059, Computational Analysis and Programming Support Services

The purpose of this amendment is to provide information to all offerors concerning the High Performance Computing and Communication (HPCC) Program support. Accordingly, the following information is provided:

(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)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED

The High Performance Computing and Communications (HPCC) Program at NASA has as its goals to accelerate the development, application, and transfer of high-performance computing technologies to meet the engineering and science needs of the U.S. aeronautics, and the earth and space sciences communities, and to accelerate the implementation of a National Information Infrastructure. The effort associated with the HPCC Program at NASA Langley Research Center (LaRC) is intended to directly support the development of a Framework for Interdisciplinary Design and Optimization (FIDO). This project combines many disciplines including structures, aerodynamics, aircraft controls, propulsion, aircraft performance into one user driven framework to facilitate the design and optimization of high speed civil transports. Currently, LaRC uses several contracts to provide support for HPCC requiring development of databases, user interfaces, and programming for massively parallel computers and workstation clusters.

NASA LaRC has made a decision to consolidate the HPCC support and place this requirement under CAPSS effective January 1, 1995. This approximate 11 manyear effort for HPCC support includes two manyears of effort currently being provided under CAPSS with the remaining nine manyears provided under six different LaRC contracts. This change will not require additional Level of Effort (LOE) hours since it is anticipated that the base LOE and optional LOE as presented will be sufficient to handle any manpower increase necessary for HPCC. Therefore, for proposal purposes, this information does not change the Level of Effort (LOE) or Government Estimated Staffing Requirements and Minimum Position Qualifications previously set forth in this RFP through Amendment 1.

The Contractors currently furnishing these services have been informed of the Government's intention to consolidate this effort under CAPSS. The Government does not see any competitive advantage to be gained from this information. However, in order to avoid even the appearance of any unfair competitive advantage, this information is hereby provided.

AMENDMENT OF SOLICITATION / MODIFICATION OF CONTRACT

1 2

2. AMENDMENT/MODIFICATION NO. 3	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		7. ADMINISTERED BY (If other than Item 6)	

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  TO ALL CONCERNED	(#)	9A. AMENDMENT OF SOLICITATION NO. 1-122-1150.3059
	X	9B. DATED (SEE ITEM 11) 4/15/94
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not tended.

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 COPY of the amendment; (b) By acknowledging receipt of this amendment on each copy of the o submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT 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 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.

(#)	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 of 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 1-122-1150.3059, Computational Analysis and Programming Support Services

The purpose of this amendment is to provide questions (31-34) and answers

31. Attachment 6--Key Personnel Requirements, revises the qualification for the Senior Analyst (Mission Software) to "Should have a Master of Science Degree in Engineering, Computer Science, Mathematics, Physical Sciences, or a related field."

(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) ROSEMARY C. FROELICH
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED
16B. UNITED STATES OF AMERICA BY <u>Rosemary C. Froelich</u> (Signature of Contracting Officer)	16C. DATE SIGNED 5-26

Question: Since the amendment states that the nominee "should" have a Master of Science Degree, can two years of specialized experience (above the eight required years) substitute for the Masters Degree?

Answer: Attachment 6 lists the Government's minimum qualifications for the Key Personnel. The resumes of Key Personnel will be evaluated by the Source Evaluation Committee (SEC) against these minimum qualifications. Weakness may be assigned for failure of a candidate to meet one or more of the specified qualifications and strengths may be assigned if a candidate exceeds the minimum qualifications. Both strengths and weaknesses are considered by the SEC to be either minor or major in importance. It is possible for strengths and weaknesses to offset or out weigh one another.

32. NASA PN 89-57 addresses significant changes to previous GFE procedures and states "Consideration has been given to any alternative uses by Government personnel within the agency . . ." Amendment No. 1 also provided in Exhibit "G" a listing of Government Provided Software which was not included in the original RFP.

Question: Will the entire list of ADP equipment provided in the RFP be available for Contractor use or will it be subject to NASA screening prior to transfer to the Contractor?

Answer: The entire list of ADP equipment provided in the RFP will be available for Contractor use.

33. Question: Does the inclusion of Government Provided Software indicate that this type of material will not be direct chargeable to particular tasks and must be supported and replaced from overhead funds?

Answer: See Amendment No. 1. Section L, L.35, Proposal Preparation and Submission--Special Instructions, Paragraph E.1.(12), Specified Other Direct Costs (ODC), indicates that software costs are included in the specified ODC's. Exhibit G was added as a result of Question 15.

34. Question: Amendment No. 1 changed the degree requirements for all Senior Analyst positions from a Bachelor's Degree to a Master's Degree. Would the Government accept additional years of experience as a substitute for the Master's degree provided that the individual held a Bachelor's Degree? A proposed equivalency would be two years of additional experience in lieu of a Master's degree.

Conversely, would the Government accept a Master's Degree in lieu of two years of experience? A proposed equivalency would be a Master's Degree for two years of experience.

Answer: Resumes are only required for Key Personnel. See answer to Question 31 for evaluation impact on Key Personnel. For non-key personnel positions, the selected Contractor will be expected to provide a competent workforce on the effective date of the contract.