

<p style="text-align: center;">TERMS AND CONDITIONS APPLICABLE TO INFORMATION TECHNOLOGY (IT) PROFESSIONAL SERVICES (SPECIAL ITEM NUMBER 132-51)</p>

1. SCOPE

- a. The prices, terms and conditions stated under Special Item Number 132-51 Information Technology Professional Services apply exclusively to IT/EC Services within the scope of this Information Technology Schedule.
- b. The Contractor shall provide services at the Contractor's facility and/or at the Government location, as agreed to by the Contractor and the ordering office.

2. ORDERING PROCEDURES

- a. Procedures for IT professional services priced on GSA schedule at hourly rates.
 - (1) FAR 8.402 contemplates that GSA may occasionally find it necessary to establish special ordering procedures for individual Federal Supply Schedules or for some Special Item Numbers (SINs) within a Schedule. GSA has established special ordering procedures for IT professional services (SIN 132-51) that are priced on schedule at hourly rates. These special ordering procedures which are outlined herein take precedence over the procedures in FAR 8.404.
 - (2) The GSA has determined that the rates for IT professional services contained in this pricelist are fair and reasonable. However, the ordering office using this contract is responsible for considering the level of effort and mix of labor proposed to perform a specific task being ordered and for making a determination that the total firm-fixed price or ceiling price is fair and reasonable.
 - (3) When ordering IT professional services ordering offices shall –
 - (i) Prepare a Request for Proposal:
 - (A) A performance-based statement of work that outlines, at a minimum, the work to be performed, location of work, period of performance, deliverable schedule, applicable standards, acceptance criteria, and any special requirements (i.e., security clearances, travel, special knowledge, etc.) should be prepared.
 - (B) A request for proposal should be prepared which includes the performance-based statement of work and requests the contractors submit either a firm-fixed price or a ceiling price to provide the services outlined in the statement of work. A firm-fixed price order shall be requested, unless the ordering office makes a determination that it is not possible at the time of placing the order to estimate accurately the extent or duration of the work or to anticipate cost with any reasonable degree of confidence. When such a determination is made, a labor hour or time-and-materials proposal may be requested. The firm-fixed price shall be based on the hourly rates in the schedule contract and shall consider the mix of labor categories and level of effort required to perform the services described in the statement of work. The firm-fixed price of the order should also include any travel costs or other incidental costs related to performance of

the services ordered, unless the order provides for reimbursement of travel costs at the rates provided in the Federal Travel or Joint Travel Regulations. A ceiling price must be established for labor hour and time and material orders.

- (C) The request for proposal may request the contractors, if necessary or appropriate, submit a project plan for performing the task and information on the contractor's experience and/or past performance performing similar tasks.
- (D) The request for proposal shall notify the contractors what basis will be used for selecting the contractor to receive the order. The notice shall include the basis for determining whether the contractors are technically qualified and provide an explanation regarding the intended use of any experience and/or past performance information in determining technical acceptability of responses. If consideration will be limited to schedule contractors who are small business concerns as permitted by paragraph (ii)(A) below, the request for proposals shall notify the contractors that will be the case.

(ii) Transmit the Request for Proposal to Contractors:

- (A) Based upon an initial evaluation of catalogs and pricelists, the ordering office should identify the contractors that appear to offer the best value (considering the scope of services offered, hourly rates and other factors such as contractors' locations, as appropriate). When buying IT professional services under SIN 132-51 ONLY, the ordering office, at its discretion, may limit consideration to those schedule contractors that are small business concerns. This limitation is not applicable when buying supplies and/or services under other SINs as well as SIN 132-51. The limitation may only be used when at least three (3) small businesses that appear to offer services that will meet the agency's needs are available, if the order is estimated to exceed the micro-purchase threshold.
- (B) The request for proposal should be to three (3) contractors if the proposed order is estimated to exceed the micro-purchase threshold, but not to exceed the maximum order threshold. For proposed orders exceeding the maximum order threshold, the request for proposal should be provided to additional contractors that offer services that will meet the agency's needs. Ordering offices should strive to minimize the contractors' costs associated with responding to requests for proposals for specific orders. Requests should be tailored to the minimum level necessary for adequate evaluation and selection for order placement.

(iii) Evaluate proposals and select the contractor to receive the order:

After responses have been evaluated against the factors identified in the request for proposal, the order should be placed with the schedule contractor that represents the best value and results in the lowest overall cost alternative (considering price, special qualifications, administrative costs, etc.) to meet the Government's needs.

- (4) The establishment of Federal Supply Schedule Blanket Purchase Agreements (BPAs) for recurring services is permitted when the procedures outlined herein are followed. All BPAs for services must define the services that may be ordered under the BPA, along with delivery or performance time frames, billing procedures, etc. The potential volume of orders under BPAs, regardless of the size of individual orders, may offer the ordering

office the opportunity to secure volume discounts. When establishing BPAs ordering offices shall –

- (i) Inform contractors in the request for proposal (based on the agency's requirement) if a single BPA or multiple BPAs will be established, and indicate the basis that will be used for selecting the contractors to be awarded the BPAs.

- (A) SINGLE BPA: Generally, a single BPA should be established when the ordering office can define the tasks to be ordered under the BPA and establish a firm-fixed price or ceiling price for individual tasks or services to be ordered. When this occurs, authorized users may place the order directly under the established BPA when the need for service arises. The schedule contractor that represents the best value and results in the lowest overall cost alternative to meet the agency's needs should be awarded the BPA.

- (B) MULTIPLE BPAs: When the ordering office determines multiple BPAs are needed to meet its requirements, the ordering office should determine which contractors can meet any technical qualifications before establishing the BPAs. When multiple BPAs are established, the authorized users must follow the procedure in (3)(ii)(B) above, and then place the order with the schedule contractor that represents the best value and results in the lowest overall cost alternative to meet the agency's needs.

- (ii) Review BPAs periodically. Such reviews shall be conducted at least annually. The purpose of the review is to determine whether the BPA still represents the best value (considering price, special qualifications, etc.) and results in the lowest overall cost alternative to meet the agency's needs.

- (5) The ordering office should give preference to small business concerns when two or more contractors can provide the services at the same firm-fixed price or ceiling price.

- (6) When the ordering office's requirement involves both products as well as IT professional services, the ordering office should total the prices for the products and the firm-fixed price for the services and select the contractor that represents the greatest value in terms of meeting the agency's total needs.

- (7) The ordering office, at a minimum, should document orders by identifying the contractor the services were purchased from, the services purchased, and the amount paid. If other than a firm-fixed price order is placed, such documentation should include the basis for the determination to use a labor-hour or time-and-materials order. For agency requirements in excess of the micro-purchase threshold, the order file should document the evaluation of schedule contractors' proposals that formed the basis for the selection of the contractor that received the order and the rationale for any trade-offs made in making the selection.

- b. Ordering Procedures for other services available on schedule at fixed prices for specifically defined services or tasks.

Orders placed pursuant to a Multiple Award Schedule (MAS), using the procedures in FAR 8.404, are considered to be issued pursuant to full and open competition. Therefore, when placing orders under Federal Supply Schedules, ordering offices need not seek further

competition, synopses the requirement, make a separate determination of fair and reasonable pricing, or consider small business set-asides in accordance with subpart 19.5. GSA has already determined the prices of items under schedule contracts to be fair and reasonable. By placing an order against a schedule using the procedures outlined below, the ordering office has concluded that the order represents the best value and results in the lowest overall cost alternative (considering price, special features, administrative costs, etc.) to meet the Government's needs.

- (1) **Orders placed at or below the micro-purchase threshold.** Ordering offices can place orders at or below the micro-purchase threshold with any Federal Supply Schedule Contractor.
- (2) **Orders exceeding the micro-purchase threshold but not exceeding the maximum order threshold.** Orders should be placed with the Schedule Contractor that can provide the supply or service that represents the best value. Before placing an order, ordering offices should consider reasonably available information about the service offered under MAS contracts by using the "GSA Advantage!" on-line shopping service, or by reviewing the catalogs/pricelists of at least three Schedule Contractors and selecting the delivery and other options available under the schedule that meets the agency's needs. In selecting the service representing the best value, the ordering office may consider— (i) special features of the service that are required in effective program performance and that are not provided by a comparable service; and (ii) past performance.
- (3) **Orders exceeding the maximum order threshold.** Each schedule contract has an established maximum order threshold. This threshold represents the point where it is advantageous for the ordering office to seek a price reduction. In addition to following the procedures in paragraph b, above, and before placing an order that exceeds the maximum order threshold, ordering offices shall--
 - (i) Review additional Schedule Contractors' catalogs/pricelists or use the "GSA Advantage!" on-line shopping service;
 - (ii) Based upon the initial evaluation, generally seek price reductions from the Schedule Contractor(s) appearing to provide the best value (considering price and other factors); and
 - (iii) After price reductions have been sought, place the order with the Schedule Contractor that provides the best value and results in the lowest overall cost alternative. If further price reductions are not offered, an order may still be placed, if the ordering office determines that it is appropriate.

NOTE: For orders exceeding the maximum order threshold, the Contractor may:

- (A) Offer a new lower price for this requirement (the Price Reductions clause is not applicable to orders placed over the maximum order in FAR 52.216-19 Order Limitations);
- (B) Offer the lowest price available under the contract; or
- (C) Decline the order (orders must be returned in accordance with FAR 52.216-19).

- (4) **Blanket purchase agreements (BPAs).** The establishment of Federal Supply Schedule BPAs is permitted when following the ordering procedures in FAR 8.404. All schedule contracts contain BPA provisions. Ordering offices may use BPAs to establish accounts with Contractors to fill recurring requirements. BPAs should address the frequency of ordering and invoicing, discounts, and delivery locations and times.
- (5) **Price reductions .** In addition to the circumstances outlined in paragraph (3), above, there may be instances when ordering offices will find it advantageous to request a price reduction. For example, when the ordering office finds a schedule service elsewhere at a lower price or when a BPA is being established to fill recurring requirements, requesting a price reduction could be advantageous. The potential volume of orders under these agreements, regardless of the size of the individual order, may offer the ordering office the opportunity to secure greater discounts. Schedule Contractors are not required to pass on to all schedule users a price reduction extended only to an individual agency for a specific order.
- (6) **Small business.** For orders exceeding the micro-purchase threshold, ordering offices should give preference to the items of small business concerns when two or more items at the same delivered price will satisfy the requirement.
- (7) **Documentation.** Orders should be documented, at a minimum, by identifying the Contractor the item was purchased from, the item purchased, and the amount paid. If an agency requirement in excess of the micro-purchase threshold is defined so as to require a particular brand name, product, or feature of a product peculiar to one manufacturer, thereby precluding consideration of a product manufactured by another company, the ordering office shall include an explanation in the file as to why the particular brand name, product, or feature is essential to satisfy the agency's needs.

3. **ORDER**

- a. Agencies may use written orders, EDI orders, blanket purchase agreements, individual purchase orders, or task orders for ordering services under this contract. Blanket Purchase Agreements shall not extend beyond the end of the contract period; all services and delivery shall be made and the contract terms and conditions shall continue in effect until the completion of the order. Orders for tasks, which extend beyond the fiscal year for which funds are available, shall include FAR 52.232-19 Availability of Funds for the Next Fiscal Year. The purchase order shall specify the availability of funds and the period for which funds are available.
- b. All task orders are subject to the terms and conditions of the contract. In the event of conflict between a task order and the contract, the contract will take precedence.

4. **PERFORMANCE OF SERVICES**

- a. The Contractor shall commence performance of services on the date agreed to by the Contractor and the ordering office.
- b. The Contractor agrees to render services only during normal working hours, unless otherwise agreed to by the Contractor and the ordering office.

- c. The Agency should include the criteria for satisfactory completion for each task in the Statement of Work or Delivery Order. Services shall be completed in a good and workmanlike manner.
- d. Any Contractor travel required in the performance of IT Services must comply with the Federal Travel Regulation or Joint Travel Regulations, as applicable, in effect on the date(s) the travel is performed. Established Federal Government per diem rates will apply to all Contractor travel. Contractors cannot use GSA city pair contracts.

5. INSPECTION OF SERVICES

The Inspection of Services–Fixed Price (AUG 1996) clause at FAR 52.246-4 applies to firm-fixed price orders placed under this contract. The Inspection–Time-and-Materials and Labor-Hour (JAN 1986) clause at FAR 52.246-6 applies to time-and-materials and labor--hour orders placed under this contract.

6. RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall comply with all laws, ordinances, and regulations (Federal, State, City, or otherwise) covering work of this character.

7. RESPONSIBILITIES OF THE GOVERNMENT

Subject to security regulations, the ordering office shall permit Contractor access to all facilities necessary to perform the requisite IT Services.

8. INDEPENDENT CONTRACTOR

All IT/EC Services performed by the Contractor under the terms of this contract shall be as an independent Contractor, and not as an agent or employee of the Government.

9. ORGANIZATIONAL CONFLICTS OF INTEREST

a. Definitions.

“Contractor” means the person, firm, unincorporated association, joint venture, partnership, or corporation that is a party to this contract.

“Contractor and its affiliates” and “Contractor or its affiliates” refers to the Contractor, its chief executives, directors, officers, subsidiaries, affiliates, subcontractors at any tier, and consultants and any joint venture involving the Contractor, any entity into or with which the Contractor subsequently merges or affiliates, or any other successor or assignee of the Contractor.

An “Organizational conflict of interest” exists when the nature of the work to be performed under a proposed Government contract, without some restriction on activities by the Contractor and its affiliates, may either (i) result in an unfair competitive advantage to the Contractor or its affiliates or (ii) impair the Contractor’s or its affiliates’ objectivity in performing contract work.

- b. To avoid an organizational or financial conflict of interest and to avoid prejudicing the best interests of the Government, ordering offices may place restrictions on the Contractors, its affiliates, chief executives, directors, subsidiaries and subcontractors at any tier when placing orders against schedule contracts. Such restrictions shall be consistent with FAR 9.505 and shall be designed to avoid, neutralize, or mitigate organizational conflicts of interest that might otherwise exist in situations related to individual orders placed against the schedule contract. Examples of situations, which may require restrictions, are provided at FAR 9.508.

10. INVOICES

The Contractor, upon completion of the work ordered, shall submit invoices for IT/EC services. Progress payments may be authorized by the ordering office on individual orders if appropriate. Progress payments shall be based upon completion of defined milestones or interim products. Invoices shall be submitted monthly for recurring services performed during the preceding month.

11. PAYMENTS

For firm-fixed price orders the Government shall pay the Contractor, upon submission of proper invoices or vouchers, the prices stipulated in this contract for service rendered and accepted. Progress payments shall be made only when authorized by the order. For time-and-materials orders, the Payments under Time-and-Materials and Labor-Hour Contracts (Alternate I (APR 1984)) at FAR 52.232-7 applies to time-and-materials orders placed under this contract. For labor-hour orders, the Payment under Time-and-Materials and Labor-Hour Contracts (FEB 1997) (Alternate II (JAN 1986)) at FAR 52.232-7 applies to labor-hour orders placed under this contract.

12. RESUMES

Resumes shall be provided to the GSA Contracting Officer or the user agency upon request.

13. INCIDENTAL SUPPORT COSTS

Incidental support costs are available outside the scope of this contract. The costs will be negotiated separately with the ordering agency in accordance with the guidelines set forth in the FAR.

14. APPROVAL OF SUBCONTRACTS

The ordering activity may require that the Contractor receive, from the ordering activity's Contracting Officer, written consent before placing any subcontract for furnishing any of the work called for in a task order.

15. DESCRIPTION OF IT SERVICES AND PRICING

0001 Program Manager

Duties: Provide supervision to technical staff and be ultimately responsible for the project and ensure that all aspects of the project are carried out according to the Requirement Specifications. Duties include planning, budgeting, staffing, personnel management, and training.

Qualifications: Qualifications: Bachelor's degree in Computer Science, Information Systems,

Engineering, Business, or other related scientific or technical discipline is preferred with progressive related experience.

0002 System Analyst I

Duties: Provide first level help desk support for hardware and software including operating systems and office automation applications.

Qualifications: Bachelor's degree in Computer Science, Information Systems, Engineering, or other related scientific or technical discipline is preferred.

0003 System Analyst II

Duties: Provide second level help desk support for hardware and software including operating systems, networking, and office automation applications. Perform system administration tasks such as backups, user account management, e-mail administration, and load balancing

Qualifications: Bachelor's degree in Computer Science, Information Systems, Engineering, or other related scientific or technical discipline; and two years experience working in the information systems field (systems management, programming, network support, or a related field); and two years of system administration experience is preferred.

0004 System Analyst III

Duties: Provide high level technical support to Systems Analysts I and II. Develop plans, strategies and implementation details for improving, enhancing, and upgrading overall Systems including hardware and software. Research, test, develop, and implement software distribution, license metering, load balancing, system security, and data integrity. Develop software utilities to automate system administration tasks. Develop Standard Operating Procedures, Contingency Plan, and Disaster Recovery Plan. Develop a plan to test and check the overall system security and system integrity periodically to ensure reliable and secured operations of computer systems and information. Conduct periodic meetings for reporting and training purposes with other system administrators.

Qualifications: Bachelor's degree in Computer Science, Information Systems, Engineering, or other related scientific or technical discipline; and three years of advance experience that have resulted in the ability to perform the system and network administration, system integration, programming and scripting using high level programming languages is preferred.

0005 Inventory Specialist

Duties: Maintain an inventory of computer hardware equipment and peripherals. Coordinate repairs with the hardware vendors. Ship the broken hardware to the appropriate repair facility and receive the repaired and new equipment at the loading dock.

Qualifications: Ability to ship, receive, and track incoming and outgoing computer hardware and software; and ability to take accurate inventories of computer hardware and software is preferred.

0006 Network Analyst I

Duties: Provide network engineering support for Local and Wide Area Networks comprised of TCP/IP networking protocol. Provide network administration for network gear including hubs, routers, cables, and switches. Provide help desk support for network related problems.

Qualifications: Bachelor's degree in Computer Science, Information Systems, Telecommunications, Engineering, or other related scientific or technical discipline; and two years experience working in an Information Systems field (systems management, network support, LAN/WAN manager, or related field) working with TCP/IP networking protocol and one year experience working with DNS and Firewalls is preferred.

0007 Network Analyst II

Duties: Provide high level network support for LAN and WAN configurations. Plan, design, document, and implement a complete network topology for LANs/WANs. Administer DNS, Firewalls, Routers, Gateways, and Switches. Provide troubleshooting and network analysis to improve and enhance the network performance. Monitor and ensure network security and data integrity.

Qualifications: Bachelor's degree in Computer Science, Information Systems, Telecommunications, Engineering, or other related scientific or technical discipline; and three years experience working in an Information Systems field (systems management, network support, LAN/WAN manager, or related field); and three years of network support experience working with TCP/IP networking protocol; and three years experience working in the configuration of all common routing protocols (e.g., rip and ospf), along with three years in configuring troubleshooting routers, hubs, network cards and network operating systems, DNS, SNMP, Firewalls and network packet analyzers is preferred.

0008 Training Specialist

Duties: Provide class room training for operating systems such as Windows95 and Windows NT, office automation software, e-mail software, groupware, and web development tools. Develop training materials, reference manuals, user guides, and lesson plans for students.

Qualifications: Bachelors degree in the field of education; and three years experience teaching office automation products in a classroom environment; and two years experience developing lesson plans, course materials, user guides, and reference materials

0009 Information Technology Specialist

Duties: Provide help desk support for office automation software. Provide one-on-one software application training. Develop user guides and aides to office automation applications.

Qualifications: Bachelor's degree in the Computer Information Systems field; and three years of office automation application support and information technology experience is preferred.

0010 Visual Information Specialist

Duties: Provide end-user support in developing and designing graphics and web pages. Create logos, layouts, and artwork by free hand as well as using software. Provide audio and visual support including setup and configuration of teleconferencing systems.

Qualifications: Bachelors degree in the field of Fine Arts, specializing in the area of computer graphics design; and three years experience in developing computer generated art work and graphical presentations; and two years experience working with audio visual equipment, and video teleconferencing systems is preferred.

0011 Web Master

Duties: Design and develop web pages and web sites. Maintain and administer web sites and web servers. Provide end-user support for developing web pages and web applications. Provide help desk support for web related problems.

Qualifications: Bachelor's degree in Computer Science, Information Systems or other related technical discipline and two years of experience in designing and maintaining Internet/Intranet web sites and pages; and experience installing and administering a web server, web-enabled database development, HTML programming and web site development with web page authoring tools to include Microsoft Front Page and others is preferred.

0012 Jr. Programmer

Duties: Develop software applications in accordance with the requirement specifications.

Participate in full life cycle software development including designing, coding, implementation,

and support.

Qualifications: Bachelors degree in Computer Science, Information Systems or other related technical discipline; and two years working experience with Visual Basic, Microsoft Access development, and SQL Server is preferred.

0013 Programmer

Duties: Development of Requirement Specifications document, planning, design, coding, testing, and implementation of custom applications designed for client-server environment, and Web Enabled Applications. Lead the programming team and conduct full life-cycle software development and product enhancements.

Qualifications: Bachelors degree in Computer Science, Information Systems or other related technical discipline; and five years working experience with Visual Basic, Microsoft Access development, and SQL Server is preferred.

0014 ADP Systems Engineer

Duties: Technical design, planning, development and testing of various types of fully integrated computer-based systems. Experienced in the conceptual, definition, development, test and operational phases of the system cycle. Knowledgeable of system development processes. Requires knowledge of mainframe, mini, and microcomputer hardware, utility software, and mass storage technology. Individual must be qualified and experienced in communications-computer systems, and the installation, implementation, maintenance and tuning of operating systems, disk and tape management systems, and computer operations automation software.

Qualifications: Bachelor's Degree is preferred with progressive related experience.

0015 Sr. Business Process Reengineering Specialist

Duties: Applies process improvement and reengineering methodologies and principles to conduct process modernization projects. Duties include activity and data modeling, developing modern business methods, identifying best practices, and creating and assessing performance measurements. Provides group facilitation, interviewing, training, and provides additional forms of knowledge transfer.

Qualifications: Bachelor's degree in Computer Science, Information Systems, Engineering, Business, Education, Management Sciences, Psychology, Human Resources Development/Management, or other related scientific or technical discipline is preferred with progressive related experience.

0017 Database Administrator, Sr.

Duties: Able to install, maintain, upgrade and administrate full-featured database management systems such and related tools. Able to address system administration issues related operating systems (UNIX, DOS, Windows NT, etc.). Able to plan, design, develop, and modify databases structures, and database administration tools using products and programming languages such as PL/SQL, Visual Basic, or ORACLE Forms. Able to work with other senior technical and user staff to complete projects. Able to provide assistance and guidance to less experienced technical staff.

Qualifications: Bachelor's degree is preferred with progressive related experience.

0018 Sr. Information Management Tech

Duties: Broad experience in information resource management, communications, and automated data processing (ADP). A multi-disciplinary individual with experience in analyzing and managing information technology programs and services. The individual must have experience in information planning and ADP acquisitions. This position requires specific knowledge to understand, design, develop, test, select, implement, manage and enhance a total, integrated

information processing system.

Qualifications: Bachelor's degree is preferred with progressive related experience in broad-based ADP.

0019 Lead/Sr. Analyst/Programmer

Duties: Experienced in assessing requirements for new or modified systems, performing detailed systems design, preparing written specification, programming, and conducting module and integration tests. Experienced in design and maintenance of database management systems, use of CASE technology, and in structured requirements analysis methodologies such as information engineering. Knowledgeable of pertinent and system development processes.

Qualifications: Bachelors degree in Engineering, Science, or Math is preferred or equivalent experience.

0020 Project Manager

Duties: Serves as the project manager for a large, complex task order (or a group of task orders affecting the same common/standard/migration system) and shall assist the Program Manager in working with the Customer's Representative, management personnel and customer agency representatives. Under the guidance of the Program Manager, responsible for the overall management of the specific task order(s) and insuring that the technical solutions and schedules in the task order are implemented in a timely manner. Performs enterprise wide horizontal integration planning and interfaces to other functional systems.

Qualifications: Bachelor's degree in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline is preferred with progressive related experience.

0021 Quality Assurance Analyst

Duties: Experienced in a wide range of both hardware and software QA activities in support of major ADP and/or communications system programs. Plans and implements QA programs to verify product design and development to requirements and specifications. Establishes QA programs to validate by test plan, test criteria and test results to ensure products satisfy system specifications.

Qualifications: Bachelors degree in Science or Engineering is preferred with progressive related experience.

0022 Senior Software Engineer

Duties: Analyzes and studies complex system requirements. Designs software tools and subsystems to support software reuse and domain analyses and manages their implementation. Manages software development and support using formal specifications, data flow diagrams, other accepted design techniques, and Computer Aided Software Engineering (CASE) tools. Interprets software requirements and design specifications to code, and integrates and tests software components. Estimates software development costs and schedule. Reviews existing programs and assists in making refinements, reducing operating time, and improving current techniques.

Qualifications: Master's degree in Information Systems, Computer Science or engineering related fields is preferred with progressive related experience.

0023 Technical Writer Expert

Duties: Experienced in program documentation for management information systems.

Qualifications: Bachelor's degree in Management or a technical discipline is preferred with progressive related experience.

0024 Software Systems Engineering - Supervisor

Description: Supervises activities of all software systems personnel for a major project, several smaller projects, or a small department. Responsible for quality assurance. Makes decisions on personnel actions (hiring, terminations, promotions, etc.). Controls revenues and/or expenses within operating unit and responsible for meeting budget goals and objectives. Provides input to policy level direction regarding standards, budget constraints, etc.

0025 Software Systems Engineer – Lead

Description: Formulates/defines specifications for complex systems or modifies/maintains complex existing systems using engineering releases and utilities from the manufacturer. Responsible for program design, coding, testing, debugging and documentation. Usually responsible for applications dealing with the overall operating system, such as sophisticated file maintenance routines, large telecommunications/communications networks, computer accounting and advanced mathematical/scientific software packages. Has full technical knowledge of all phases of software systems and programming applications. Also has duties instructing, directing and checking the work of other operating systems programming personnel. Responsible for quality assurance review and the evaluation of new and existing software products. Acts as project leader for projects with small budgets or limited duration.

0026 LAN Support Technician – Senior

Monitors and responds to complex technical control facility hardware and software problems utilizing a variety of hardware and software testing tools and techniques. Provides primary interface with vendor support service groups or provides internal analysis and support to ensure proper escalation during outages or periods of degraded system performance. May provide LAN server support. Requires extensive knowledge of PC/LAN/WAN communications hardware/software in a multi-protocol environment, and network management software. May function as lead job providing guidance and training for less experienced technicians.

0027 Senior Management Analyst

Description: Plans, coordinates, and implements analyses and studies. Performs data collection and analysis including establishment of procedures for data collection and input into information systems; designs and conducts surveys; facilitates large and small group meetings; reviews and analyzes data; and identifies data sources. Performs program planning and analysis, including development of program objectives and structures; develops and constructs models of operations or processes using mathematical or statistical methods or techniques; formulates work plans, time lines, and other management tools; analyzes programmatic information; analyzes staffing requirements; assesses information needs; prepares budgets; and utilizes structured analysis and design methodology to identify and clearly organize problems through implementation of management information systems. Performs policy analysis, including development of organizational goals; identifies and compares alternative programmatic approaches to achieve goals; develops analytical and mathematical models for long-range planning; assesses cost effectiveness; performs cost benefit analyses. Performs program evaluation including development and review of methodologies and techniques for use in evaluating and monitoring program performance; determines objective measurement methods and performance indicators; develops evaluation instruments for research program planning; develops strategies for implementation of analytical findings; analyzes program performances, and operational results; evaluates data validity and reliability; evaluates program impact on agency-wide operations and effectiveness; examines

implications of policy, legislative, or programmatic initiatives; and prepares reports.
Qualifications: Bachelor's degree in Computer Science, Information Systems, Engineering, Business, Education, Management Sciences, Psychology, Human Resources Development/Management, or other related scientific or technical discipline is preferred with progressive related experience.

0028 Management Analyst

Description: Plans, coordinates, and implements analyses and studies involving one or more of the activities. Performs data collection and analysis including implementation of surveys; identifies data sources; reviews and analyzes data collected under the surveys. Performs program analysis, including staffing requirements; assesses information needs; prepares budgets; and utilizes structured analysis and design methodology to identify and clearly organize problems through implementation of management information systems. Performs policy analysis including identification and comparison of alternative programmatic approaches to achieve goals; develops analytical and mathematical models, and performs cost-benefit analyses. Evaluates validity and reliability of program data and reports.

Qualifications: Bachelor's degree in Computer Science, Information Systems, Engineering, Business, Education, Management Sciences, Psychology, Human Resources Development/Management, or other related scientific or technical discipline is preferred with progressive related experience.