GENERAL SERVICES ADMINISTRATION
MAS SCHEDULE
Authorized Federal Supply Schedule Price List

GENERAL PURPOSE COMMERCIAL INFORMATION TECHNOLOGY
EQUIPMENT, SOFTWARE, AND SERVICE

BITHGROUP Technologies, Inc.
113 West Monument Street
Baltimore, MD 21201
www.bithgroup.com

Contract Number: 47QTCA19D00GB
Contract Period: July 30, 2019 – July 29, 2024

Contact for Contracts and Ordering:
Harry Holt, VP of Operations
113 W. Monument St.
Baltimore, MD 21201
Phone: 410-962-1188 ext. 43
Fax: 410-962-6535

Business Size: Small

Online access to contract ordering information, terms and conditions, up-to-date pricing, and the
option to create an electronic delivery order is available through GSA Advantage! a menu-driven
database system. The INTERNET address for GSA Advantage! is

For more information on ordering from Federal Supply go to this website:
www.gsa.gov/schedules.
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Section 1 – Customer Information

1.1 Table of Awarded Special Item Numbers (SIN):

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<thead>
<tr>
<th>SIN</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>54151S</td>
<td>IT Professional Services</td>
</tr>
</tbody>
</table>

1.2 Lowest Priced Model Number and Price for Each SIN: N/A
(Government net price based on a unit of one)
### 1.3 Hourly Rates (Services only):

<table>
<thead>
<tr>
<th>Job Title</th>
<th>GSA Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator, Systems</td>
<td>$95.26</td>
</tr>
<tr>
<td>Applications Development Expert</td>
<td>$128.70</td>
</tr>
<tr>
<td>Architect, Application (Sr)</td>
<td>$110.58</td>
</tr>
<tr>
<td>Architect, Systems (Sr)</td>
<td>$130.98</td>
</tr>
<tr>
<td>Business Process Consultant (Sr)</td>
<td>$121.91</td>
</tr>
<tr>
<td>Computer Specialist (Sr)</td>
<td>$101.07</td>
</tr>
<tr>
<td>Computer Systems Programmer</td>
<td>$116.01</td>
</tr>
<tr>
<td>Computer Systems Programmer (Sr)</td>
<td>$120.99</td>
</tr>
<tr>
<td>Database Management Specialist (Jr)</td>
<td>$99.71</td>
</tr>
<tr>
<td>Database Management Specialist (Sr)</td>
<td>$108.80</td>
</tr>
<tr>
<td>Database Manager</td>
<td>$122.50</td>
</tr>
<tr>
<td>Documentation Specialist</td>
<td>$73.84</td>
</tr>
<tr>
<td>Engineer, Information Security</td>
<td>$127.03</td>
</tr>
<tr>
<td>Engineer, Network (Jr)</td>
<td>$95.26</td>
</tr>
<tr>
<td>Engineer, Network (Sr)</td>
<td>$107.96</td>
</tr>
<tr>
<td>Engineer, Network Security</td>
<td>$120.65</td>
</tr>
<tr>
<td>Engineer, Software</td>
<td>$106.01</td>
</tr>
<tr>
<td>Engineer, Systems Design</td>
<td>$101.47</td>
</tr>
<tr>
<td>Geospatial Web Developer (Mid-level)</td>
<td>$82.57</td>
</tr>
<tr>
<td>Geospatial Web Developer (Sr)</td>
<td>$95.26</td>
</tr>
<tr>
<td>Help Desk Manager</td>
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</tr>
<tr>
<td>Help Desk Specialist (Jr)</td>
<td>$44.46</td>
</tr>
<tr>
<td>Help Desk Specialist (Sr)</td>
<td>$75.57</td>
</tr>
<tr>
<td>IT Professional (Sr)</td>
<td>$120.91</td>
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<tr>
<td>Network Administrator</td>
<td>$79.13</td>
</tr>
<tr>
<td>Network Manager</td>
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</tr>
<tr>
<td>Network Technician (Jr)</td>
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<tr>
<td>Network Technician (Sr)</td>
<td>$102.53</td>
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<tr>
<td>Quality Assurance Consultant (Sr)</td>
<td>$120.91</td>
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<tr>
<td>Quality Assurance Manager</td>
<td>$95.72</td>
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<td>Quality Assurance Specialist</td>
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<td>Security, Data Specialist</td>
<td>$126.95</td>
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<tr>
<td>Subject Matter Expert</td>
<td>$113.85</td>
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<tr>
<td>Subject Matter Expert (Sr)</td>
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<tr>
<td>Testing Specialist</td>
<td>$87.60</td>
</tr>
<tr>
<td>Writer/Editor, Technical</td>
<td>$100.76</td>
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</table>
2. **Maximum Order*: SIN 54151S $500,000

NOTE TO ORDERING ACTIVITIES: *If the best value selection places your order over the Maximum Order identified in this catalog/pricelist, you have an opportunity to obtain a better schedule contract price. Before placing your order, contact the contractor for a better price. The contractor may (1) offer a new price for this requirement (2) offer the lowest price available under this contract or (3) decline the order. A delivery order that exceeds the maximum order may be placed under the schedule contract in accordance with FAR 8.404.

3. **Minimum Order**: SIN 54151S $100

4. **Geographic Coverage**: Domestic delivery to all 50 states, Washington, DC, Puerto Rico, US Territories and to a CONUS port or consolidation point for orders received from overseas activities.

5. **Point(s) of Production**: USA

6. **Discount from List Prices**: 5%

7. **Quantity Discount(s)**: N/A

8. **Prompt Payment Terms**: Net 30

9.1 **Government Purchase Cards**: Accepted at or below the micro-purchase threshold.

9.2 **Government Purchase Cards**: Accepted above the micro-purchase threshold. Contact contractor for limit.

10. **Foreign Items**: N/A

11.1 **Time of Delivery**: Negotiated with Ordering Agency

11.2 **Expedited Delivery**: Negotiated with Ordering Agency

11.3 **Overnight and 2-Day Delivery**: Overnight and 2-day delivery are available. Contact the Contractor for rates.

11.4 **Urgent Requirements**: Agencies can contact the Contractor’s representative to affect a faster delivery. Customers are encouraged to contact the contractor for the purpose of requesting accelerated delivery.
12. **FOB Point:**

Destination

13.1 **Ordering Address:**

BITHGROUP Technologies, Inc.
113 West Monument St.
Baltimore, MD 21201

13.2 **Ordering Procedures:**

Ordering activities shall use the ordering procedures described in Federal Acquisition Regulation 8.405-3 when placing an order or establishing a BPA for supplies or services. The ordering procedures, information on Blanket Purchase Agreements (BPA’s) and a sample BPA can be found at the GSA/FSS Schedule Homepage (fss.gsa.gov/schedules).

14. **Payment Address:**

BITHGROUP Technologies, Inc.
113 West Monument St.
Baltimore, MD 21201

15. **Warranty Provision:**

N/A

16. **Export Packing Charges:**

N/A

17. **Terms and Conditions of Government Purchase Card Acceptance:**

Accepted

18. **Terms and Conditions of Rental, Maintenance, and Repair (if applicable):**

N/A

19. **Terms and Conditions of Installation (if applicable):**

N/A

20.1 **Terms and Conditions of Repair Parts Indicating Date of Parts Price Lists and Any Discounts from List Prices (if applicable):**

N/A

20.2 **Terms and Conditions for Any Other Services (if applicable):**

N/A
21. List of Service and Distribution Points (if applicable): N/A
22. List of Participating Dealers (if applicable): N/A
23. Preventive Maintenance (if applicable): N/A
24.1 Special Attributes: N/A
24.2 Section 508 Compliance for Electronic and Information Technology (EIT): Accepted
25. DUNS Number: 93-3685588
26. Notification regarding Registration in System for Award Management (SAM) Database:
   Contractor has an Active Registration in the SAM database.
IT Professional Labor Category Descriptions

Commercial Job Title: **Administrator, Systems**

Minimum/General Experience: Two (2) years of experience in a computer-related field.

Functional Responsibility: Monitor and coordinate all data system operations, including security procedures, and liaison with end users. Ensure that necessary system backups are performed, and storage and rotation of backups is accomplished. Monitor and maintain records of system performance and capacity to arrange vendor services or other actions for reconfiguration and anticipate requirements for system expansion. Assist managers to monitor and comply with State data security requirements. Coordinate software development, user training, network management and minor installation and repair of equipment.

Minimum Education: An Associate's degree from an accredited college or university in Computer Science, Information Systems, Business, or other related technical discipline. A Bachelor's Degree in one of the above disciplines equals one-year specialized and two (2) years general experience. In additional year of specialized experience may be substituted for the required education.

Commercial Job Title: **Applications Development Expert**

Minimum/General Experience: At least seven (7) years of IT and business/industry work experience.

Functional Responsibility: Provides design recommendations based on long-term IT organization strategy. Develops enterprise level application and custom integration solutions including major enhancements and interfaces, functions, and features. Uses a variety of platforms to provide automated systems applications to customers. Provides expertise regarding the integration of applications across the business. Determines specifications, then plans, designs, and develops the most complex and business critical software solutions, utilizing appropriate software engineering processes – either individually or in concert with a project team. Will assist in the most difficult support problems.

Develops programming and development standards and procedures as well as programming architectures for code reuse. Has in-depth knowledge of state-of-the art programming languages and object-oriented approach in designing, coding, testing, and debugging programs. Understands and consistently applies the attributes and processes of current application development methodologies. Researches and maintains knowledge in emerging technologies and possible application to the business. Viewed both internally and externally as a technical expert and critical technical resource across multiple disciplines. Acts as an internal consultant, advocate, mentor and change agent.

Minimum Education: Preference for a Bachelor's or Master's Degree in Computer Science, Information Systems, or other related field or equivalent work experience.
Commercial Job Title: **Architect, Application (Senior)**

Minimum/General Experience: At least 10 years of experience planning, designing, building, and implementing IT application systems. Must have led or been chief architect in a major IT applications implementation effort. Must have a strong background in software engineering principles and techniques.

Functional Responsibility: Manages major projects that involve providing professional support services and/or the integration, implementation, and transition of large, complex systems. Provides design and development of e-government solutions and is responsible for technical design and implementation of the architecture. Designs, develops, and maintains infrastructure and backend applications. Provides expertise on defining the role of broadband and wireless applications. Provides definition of current State architecture blueprints. Provides expertise with web servers, gateways, and application servers and content management systems. Provides experience in web application technologies and middleware solutions. Researches new technologies and products for their applicability to business processes. Must be able to compare various solutions and determine the most suitable. Ensures that development efforts are well planned and in agreement with standards.

Minimum Education: Bachelor’s Degree from an accredited college or university in Engineering, Computer Science, Mathematics or other related scientific or technical discipline. Master’s degree preferred.

Commercial Job Title: **Architect, Systems (Senior)**

Minimum/General Experience: Experience performing architecture related work on at least five (5) IT systems.

Functional Responsibility: Responsible for developing business, data, systems, and infrastructure models to develop enterprise architectures. Develops plans for migrating architectures. Develops technical reference models to include hardware/software standards. Engineer’s integrated hardware and software solutions to meet mission requirements.

Minimum Education: Bachelor’s Degree from an accredited college or university in Computer Science, Information Systems, or related field or three (3) years of equivalent experience in a related field. A Master’s Degree in information technology is a plus.

Commercial Job Title: **Business Process Consultant (Senior)**

Minimum/General Experience: At least eight (8) years of experience in business process re-engineering.

Functional Responsibility: Develops business requirements and business processes re-engineering methodologies. Solves application and process related problems by creating detail process and system design specifications; and works with other areas across the business units to support a total solution approach. Communicates business requirements for reports and applications development. Facilitates collaboration within and across business units and across IT functions. Resolves problems and improves
business units’ technical environments.

Minimum/General Experience: Bachelor’s Degree from an accredited college or university in Business, Human Resources Management, or a related field. An MBA or MPA is preferred.

Commercial Job Title: **Computer Operations Center Specialist**

Minimum/General Experience: This position requires a minimum of five (5) years of experience.

Functional Responsibility: Establishes detailed schedules for utilization of all equipment in the computer operations center to obtain maximum usage. Consults with personnel in other data processing sections to coordinate activities and prepare activity and progress reports regarding the computer operations center. Evaluates production, equipment, and personnel costs. Analyzes and interprets technical data processing data. Communicates technical data processing information effectively both orally and in writing. Applies applicable rules, regulations, policies, and procedures of the computer operations center.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field. A Master's Degree is preferred.

Commercial Job Title: **Computer Systems Programmer**

General Experience: Must have five (5) years of computer experience in information systems design.

Functional Responsibility: Create and/or maintain operating systems, communications software, database packages, compilers, repositories, and utility and assembler programs. Modify existing software and develop special-purpose software to ensure efficiency and integrity between systems and applications.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field. A Master's Degree is preferred.

Commercial Job Title: **Computer Systems Programmer (Senior)**

General Experience: Must have 12 years of computer experience in information systems design.

Functional Responsibility: Create and/or maintain operating systems, communications software, database packages, compilers, repositories, and utility and assembler programs. Modify existing software and develop special-purpose software to ensure efficiency and integrity between systems and applications.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in
Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field.

Commercial Job Title: Database Management Specialist (Junior)

General Experience: Must have three (3) years of experience in DBMS systems analysis and programming.

Functional Responsibility: Must be capable of providing highly technical expertise and support in the use of DBMS. Must be able to evaluate and recommend available DBMS products to support validated user requirements. Defines file organization, indexing methods, and security procedures for specific user applications. Develops, implements, and maintains database back-up and recovery procedures for the processing environments, and ensures that data integrity, security, and recoverability are built into the DBMS applications.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field.

Commercial Job Title: Database Management Specialist (Senior)

General Experience: Must have seven (7) years of experience in the development and maintenance of database systems.

Functional Responsibility: Must be capable of providing highly technical expertise and support in the use of DBMS. Must be able to evaluate and recommend available DBMS products to support validated user requirements. Defines file organization, indexing methods, and security procedures for specific user applications. Develops, implements, and maintains database back-up and recovery procedures for the processing environments, and ensures that data integrity, security, and recoverability are built into the DBMS applications.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field.

General Experience: Must have six (6) years of experience in DBMS systems analysis and programming.

Commercial Job Title: Database Manager

General Experience: Must have four years of experience in technical writing and documentation experience pertaining to all aspects of IT.

Functional Responsibility: Must be capable of managing the development of database projects. Must be able to plan and budget staff and data resources. Supports application developers in planning preparation, load analysis, and backup and recovery of data. When necessary, reallocates resources to maximize benefits. Must be able to prepare and deliver presentations on
DBMS concepts. Provides daily supervision and direction to support staff. Monitors performance and evaluates areas to improve efficiency

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field.

Commercial Job Title: **Documentation Specialist**

Minimum/General Experience: Must have four (4) years of experience in technical writing and documentation experience pertaining to all aspects of IT.

Functional Responsibilities: Gathers, analyzes, and composes technical information. Conducts research and ensures the use of proper technical terminology. Translates technical information into clear, readable documents to be used by technical and non-technical personnel. For applications built to run in a Windows environment, uses the standard help compiler to prepare all on-line documentation.

Minimum Education: An Associate’s Degree in related field. A Bachelor’s degree is preferred.

Commercial Job Title: **Engineer, Information Security**

General Experience: This position requires a minimum of eight (8) years of experience in information protection.

Functional Responsibility: Analyzes and defines security requirements for information protection. Defines and develops security policies. Analyzes the sensitivity of information, performs vulnerability and risk assessments based on defined sensitivity and information flow.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline

Commercial Job Title: **Engineer, Network (Junior)**

General Experience: Five (5) years of experience in a computer-related field.

Functional Responsibility: Perform similar Responsibilities as directed or instructed by the senior network engineer. Conduct studies pertaining to network configuration and monitor traffic patterns such as protocols and peak usage. Stays current with technological changes.

Minimum Education: A Bachelor's degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering or other related scientific or technical discipline.
Commercial Job Title: Engineer, Network (Senior)

General Experience: Nine (9) years of experience in a computer-related field.

Functional Responsibility: Responsible for the design and implementation of large data communications or telecommunications networks. Plans and monitors the installation of communications circuits. Manage and monitor local area networks and associated equipment (e.g., bridges, routers, modem pools, and gateways) Conducts short and long-term plan to meet communications requirements. Responsible for the design and implementation of LANs/WANs using hub switching and router technology. Performs hardware/software analyses to provide comparative data of performance characteristics and suitability within the existing systems environment. Prepares tradeoff studies and evaluations for vendor equipment. Generates network monitoring/performance report, for LAN/WAN utilization studies. Recommends network design changes/enhancements for improved system availability and performance.

Minimum Education: A Bachelor's degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering or other related scientific or technical discipline. If applicable, shall be certified as network engineer for the specific network operating system as defined in the State task request. The certification criteria are determined by the network operating system vendor.

Commercial Job Title: Engineer, Network Security

General Experience: This position requires a minimum of eight (8) years of computer-related experience.

Functional Responsibility: Designs, develops, engineers, and implements solutions for projects such as biometrics, smart cards, Secure remote access, VPN, Intrusion detection, port scanning, web security and vulnerability assessments and remediation.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline. A Master's Degree in one of the above disciplines equals one-year specialized and two years general experience. An additional year of specialized experience may be substituted for the required education.

Commercial Job Title: Engineer, Software

General Experience: Must have three (3) years of experience as a software engineer.


Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field.
Commercial Job Title: **Engineer, Systems**

General Experience: Must have three (3) years of experience in systems engineering.

Functional Responsibility: Must be capable of analyzing information requirements. Evaluates system problems of workflow, organization, and planning. Develops appropriate corrective action.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field.

Commercial Job Title: **Engineer, Systems (Senior)**

General Experience: Must have six (6) years of experience in systems engineering

Functional Responsibility: Must be able to analyze information requirements. Must be able to evaluate problems in workflow, organization, and planning. Develops appropriate corrective action. Provides daily supervision and direction to staff.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline.

Commercial Job Title: **Engineer Systems Design**

General Experience: Must have six (6) years of experience planning, designing, building, and implementing IT systems. Familiar with Capability Maturity Model compliant structured methodology.

Functional Responsibility: Must be able to perform design of information systems, including the design of the application architecture, database, and interfaces. Responsible for gathering and analyzing user requirements and translating them into system designs.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline.

Commercial Job Title: **Geospatial Web Developer (Mid-level)**

Minimum Experience: At least three (3) years of experience working on GIS development projects related to the following skills:

- ESRI ArcGIS desktop, ArcGIS Server, and REST APIs, and ArcSDE
- At least one (1) year of experience with Oracle or other RDBMS, SQL, and/or PL/SQL
- At least one (1) year of experience with other industry-standard technologies such as XML, Web services, application servers, and Web servers
- At least one (1) year developing web mapping applications using Flex and
Functional Responsibility: install and configure ArcGIS Server; develop mapping applications and web services using ArcGIS Server for Flex and JavaScript/HTML5, build and publish maps via ArcGIS and ArcGIS Online resources, ArcSDE databases, and geo-processing tools as services in ArcGIS Server to streamline existing geospatial procedures; develop mobile GIS applications, assume responsibility of full project lifecycle on simple projects; act proactively to avoid agency customer issues and meet their business needs. The ideal candidate will also have experience developing for HTML 5, using open-source geospatial software development tools, and developing for multiple PC, iOS, Android platforms. This role also requires an understanding of project management, including all software development life cycle phases. A firm understanding of database architecture is also needed.

Minimum Education: Bachelor's or Master's degrees from an accredited college or university in computer science, GIS, engineering, or related field; or three (3) years of equivalent experience in a related field.

Commercial Job Title: **Geospatial Web Developer (Senior)**

Minimum Experience: At least four (4) years of experience working on GIS development projects using the following skills:

- ESRI ArcGIS desktop, ArcGIS Server, and REST APIs, and ArcSDE
- At least three (3) years of experience with Oracle or other RDBMS, SQL, and/or PL/SQL
- At least three (3) years of experience with other industry-standard technologies such as XML, Web services, application servers, and Web servers

Functional Responsibility: This is Senior GIS Software Developer position. Responsibilities include: install and configure ArcGIS Server; develop mapping applications and web services using ArcGIS Server for Flex and JavaScript/HTML5, build and publish maps via ArcGIS and ArcGIS Online resources, ArcSDE databases, and geo-processing tools as services in ArcGIS Server to streamline existing geospatial procedures; develop mobile GIS applications, assume responsibility of full project lifecycle on simple projects; act proactively to avoid agency customer issues and meet their business needs.

The ideal candidate will also have experience developing for HTML 5, using open-source geospatial software development tools, and developing for multiple PC, iOS, and Android platforms.

This role also requires an understanding of project management, including all software development life cycle phases. A firm understanding of database architecture is also needed.

Minimum Education: Bachelor's or Master's degrees from an accredited college or university in computer science, GIS, engineering, or related field; or four (4) years of equivalent experience in a related field.

- At least one (1) year of experience developing web mapping applications using Flex
- At least one (1) year of experience developing web mapping applications using
Commercial Job Title: **Help Desk Manager**

General Experience: This position requires a minimum of seven (7) years of experience in the management of a Help Desk. General experience includes information systems development, network and other work in the client/server field, or related fields.

Functional Responsibility: Provides daily supervision and direction to staff who are responsible for phone and in-person support to users in the areas of e-mail, directories, standard Windows desktop applications, and other network services. Manages personnel who serve as the first point of contact for troubleshooting hardware and software PC and printer problems.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field. A Master's Degree is preferred.

Commercial Job Title: **Help Desk Specialist (Junior)**

General Experience: This position requires a minimum of five (5) years of experience in business IT environments with emphasis on PC hardware and applications. General experience includes information systems development, work in the client/server field, or related fields.

Functional Responsibility: Provides telephone and in-person support to users in the areas of directories, standard Windows desktop applications, and applications developed under this Contract or predecessors. Serves as the initial point of contact for troubleshooting hardware/software PC and printer problems.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field.

Commercial Job Title: **Help Desk Specialist (Senior)**

General Experience: This position requires a minimum of seven (7) years of experience in a business IT environment with emphasis on PC computer hardware and applications. General experience includes, but is not limited to information systems development, work in the client/server field, or related fields.

Functional Responsibility: Provides telephone and in-person support to users in the areas of directories, standard Windows desktop applications, and applications developed under this Contract or predecessors. Serves as the initial point of contact for troubleshooting hardware/software PC and printer problems.

Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical
discipline or three (3) years of equivalent experience in a related field.

Commercial Job Title: **IT Professional (Senior)**

General Experience: At least eight (8) years of relevant industry experience in the discipline required

Functional Responsibility: Identifies strategic issues for the Information Management Department and advises IT Senior Management of the risks and/or opportunities created by these issues. Issues will be centered on IT measurements and IT project management. IT measurements will encompass the refining or creating of measures related to value creation of IT products and services. Project Management will include presenting recommendations on ways of managing projects more effectively (including, but not limited to appropriate methodology and quality reviews). Accountabilities include coordinating input from various IT departments to develop recommendations, conducting analyses of issues and ensuring adequate communication of the endorsed positions and recommendations to stakeholders.

Minimum Education: Bachelor’s Degree from an accredited college or university in Engineering, Computer Science, Information Systems, Business, Mathematics or a related technical or business field. A Master’s degree is preferred.

Commercial Job Title: **Network Administrator**

General Experience: Two (2) years of experience in a computer-related field.

Functional Responsibility: Performs a variety of network management functions related to the operation, performance, or availability of data communications networks. Experience with cable/LAN meters, protocol analyzers, SNMP and RMON based software products. Knowledge of Ethernet, FDDI and high-speed WANs and routers. Analyze client LANs/WANs, isolate source of problems, and recommend reconfiguration and implementation of new network hardware to increase performance. Advanced knowledge of network operating systems. Modifies command language programs, network start up files, assigns/reassigns network device logical, participates in load balancing efforts throughout the network to achieve optimum device utilization and performance. Establishes new user accounts on the network granting access to required network files and programs. Manages network Email functions. Establishes mailboxes and monitors mail performance on the network. Troubleshoots network/user problems, presents resolutions for implementation. Prepares a variety of network resource reports.

General Education and other Requirements: An Associate's degree from an accredited college or university in Computer Science, Information Systems, Engineering, or a related field, or two (2) years of college or university study in Computer Science, Information Systems, Engineering, or a related field. If applicable, should be certified as a network administrator for a specific network operating system as defined in the State task request. Certification criteria is determined by the network operating system vendor. Two (2) additional years of specialized experience may be substituted for the required education.
Commercial Job Title: **Network Manager**

General Experience: 12 years of experience in a computer-related field.

Minimum Education and Other Requirements: A Bachelor's degree from an accredited college or university with a major in Computer Science, Information Technology, Engineering, or a related discipline. If applicable, shall be certified as network engineer for the specific network operating system as defined in the State task request. The certification criteria are determined by the network operating system vendor.

Functional Responsibility: Performs a variety of network management functions in support of MIS services related to the operation, performance, or availability of data communications networks. Modifies command language programs, network start up files, assigns/re-assigns network device logical, analyzes network performance and recommends adjustments to wide variety of complex network management functions with responsibility for overall performance and availability of networks. LAN/WAN consultant skilled in network analysis, integration and tuning. Experience with cable/LAN meters, protocol analyzers, Simple Network Management Protocol (SNMP) and Remote Monitoring (RMON) based software products. Knowledge of Ethernet, FDDI and high-speed WANs, routers, bridges, and switches. Analyze client LANs/WANs, isolate source of problems, and recommend reconfiguration and implementation of new network hardware to increase performance. Working knowledge of network operating systems. Conducts load balancing efforts to achieve optimum device utilization and network performance. Manages network Email functions. Establishes mailboxes and monitors mail performance on the network. Coordinates with communications engineering to resolve hardware problems. Works with customer and operations staff in scheduling preventative and emergency maintenance activities.

Commercial Job Title: **Network Technician (Junior)**

General Experience: Three (3) years of experience in a computer-related field.

Functional Responsibility: Perform similar Responsibilities as directed or instructed by the senior network engineer. Adds or exchanges externally connected PC accessories and data communications equipment including cables, boards, batteries, disks drives, and other PC components. Attaches, detaches, or exchanges LAN cabling to workstations, servers, network devices, telecommunications, and data communications equipment.

Minimum Education: An Associate's degree from an accredited college or university in Computer Science, Information Systems, Engineering, or a related field; or Technical school certificate of completion in the data communications field including cable installation, or the equivalent military training. An additional year of specialized experience may be substituted for the required education.

Commercial Job Title: **Network Technician (Senior)**

General Experience: Seven (7) years of experience in a computer-related field.

Functional Responsibility: Adds or exchanges externally connected PC accessories and data communications equipment. Troubleshoots LANs/WANs and provides problem resolution for PC
and data communications hardware. Adds or replaces boards, batteries, disks drives, and other PC components. Installs cabling for networks such as LANs and WANs. Attaches, detaches, or exchanges LAN cabling to workstations, servers, network devices, telecommunications, and data communications equipment. Works independently, may provide supervision and guidance to two (2) or more network technicians.

Minimum Education: An Associate's degree from an accredited college or university in Computer Science, Information Systems, Engineering, or a related field; or Technical 'school certificate of completion in the data communications field including cable installation; or the equivalent military training. Two (2) additional years of specialized experience may be substituted for the required education.

Commercial Job Title: **Quality Assurance Consultant (Senior)**

General Experience: At least eight (8) years information systems quality assurance experience.

Functional Responsibility: Provides quality management for information systems using the standard methodologies, techniques, and metrics for assuring product quality and key activities in quality management. Establish capable processes, monitoring and control of critical processes and product mechanisms for feedback of performance, implementation of an effective root cause analysis and corrective action system, and continuous process improvement. Provides strategic quality plans in targeted areas of the organization. Provides QA strategies to ensure continuous production of products consistent with established industry standards, government regulations and customer requirements. Develops and implements life cycle and QA methodologies and educates and implements QA metrics.

Minimum Education: Bachelor's Degree from an accredited college or university in Engineering, Computer Science, Information Systems, or other related discipline. A Master's degree preferred.

Commercial Job Title: **Quality Assurance Manager**

General Experience: Must have six (6) years of experience in quality assurance and quality control.

Functional Responsibility: Must be capable of maintaining and establishing a process for evaluating software and associated documentation. Must be able to determine the resources required for quality control. Must be able to maintain the level of quality throughout the software life cycle. Develops software quality assurance plans. Conducts formal and informal reviews at predetermined points throughout the development life cycle.

Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline. A Master's Degree is preferred.

Specialized Experience: At least three (3) years of experience in verification and validation, software testing and integration, software metrics, and their application to software quality assessment.
Commercial Job Title: **Quality Assurance Specialist**

General Experience: Must have five (5) years of experience working with quality control methods and tools.

Functional Responsibility: Must be able to determine the resources required for quality control. Must be able to maintain the level of quality throughout the software life cycle. Develops software quality assurance plans. Must be capable of maintaining and establishing a process for evaluating software and associated documentation. Participates in formal and informal reviews at predetermined points throughout the development life cycle to determine quality. Examines and evaluates the software quality assurance (SQA) process and recommends enhancements and modifications. Develops quality standards.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline.

Commercial Job Title: **Security, Data Specialist**

General Experience: At least four (4) years of IT work experience in data security.

Functional Responsibility: Responsible for the planning, design, implementation and monitoring of security measures, policies, methods, and procedures which safeguard the integrity of and access to enterprise systems, files, and data elements. Responsible for acting on security violations. Maintains knowledge of changing technologies and provides recommendations for adaptation of new technologies or policies. Recognizes and identifies potential areas where existing data security policies and procedures require change, or where new ones need to be developed, especially regarding future business expansion. Provides management with risk assessments and security briefings to advise them of critical issues that may affect customer, or corporate security objectives.

Minimum Education: Preference for a Bachelor's Degree in Computer Science, Information Systems, or other related field or equivalent work experience.

Commercial Job Title: **Subject Matter Expert**

General Experience: Must have seven (7) years of experience in the IT field.

Functional Responsibility: Defines the problems and analyzes and develops plans and requirements in the subject matter area for moderately complex-to-complex systems. Coordinates and manages the preparation of analysis, evaluations, and recommendations for proper implementation of programs and systems specifications including, but not limited to information technology, health care, education, public safety, social services, human resources, transportation, and environment.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline. A Master's Degree is preferred.
Commercial Job Title: **Subject Matter Expert (Senior)**

General Experience: At least 12 years of relevant industry experience in the discipline is required.

Functional Responsibility: The area of expertise may be related to a specific discipline required by the State agency including, but not limited to information technology, health care, education, public safety, social services, human resources, transportation, and environment. Requires expertise in the formulation of specifications and in the execution of technical initiatives in vertical areas. Defines requirements, performs analyses, and develops plans and requirements for systems.

Minimum Education: Bachelor’s Degree from an accredited college or university in the specific discipline required by the State. A Master’s Degree or Ph.D. Degree is preferred.

Commercial Job Title: **Testing Specialist**

General Experience: Must have four (4) years of experience in computer software development.

Functional Responsibility: Must be capable of designing and executing IT software tests and evaluating results to ensure compliance with applicable regulations. Must be able to prepare test scripts and all required test documentation. Must be able to design and prepare all needed test data. Analyzes internal security within systems. Reviews test results and evaluates for conformance to design.

Minimum Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Engineering, Business, or other related scientific or technical discipline or three (3) years of equivalent experience in a related field. A Master's Degree is preferred.

Commercial Job Title: **Technical Writer/Editor**

General Experience: A minimum of five (5) years of experience in this area.

Functional Responsibility: Assists in collecting and organizing information for preparation of user manuals, training materials, installation guides, proposals, and reports. Edits functional descriptions, system specifications, user manuals, special reports, or any other customer deliverables and documents. Conducts research and ensures the use of proper technical terminology. Translates technical information into clear, readable documents to be used by technical and non-technical personnel. For applications built to run in a Windows environment, uses the standard help compiler to prepare all on-line documentation. Assists in performing financial and administrative functions. Must demonstrate the ability to work independently or under only general direction.

Minimum Education: Associate’s Degree in related field. A Bachelor’s degree is preferred.