

**PART B**  
**SCOPE OF SERVICES**

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# SECTION 9

## INFORMATION SYSTEMS MANAGEMENT

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### 9.1 GENERAL

Specifications and responsibilities for this Section are provided in three (3) major areas: computer network; management information systems and control systems; and operational requirements, including information input, storage, retrieval, report preparation, and real-time data access. Information gathered and archived in the performance of the Contract with VRE either electronic or in other medium will be the sole property of VRE.

### 9.2 COMPUTER NETWORK

#### 9.2.1 HARDWARE

- A. The Contractor shall operate and maintain any existing computer equipment as directed by VRE.
- B. The Contractor shall submit a request for computer equipment that does not meet the Software Vendor's recommended configuration 90 calendar days from mobilization date. For the purposes of the Contract, "Software Vendor" means any commercial vendor of software provided by VRE.
- C. During the term of the Contract, VRE shall provide all equipment necessary for the performance of the Contract. The Contractor shall operate and maintain existing computer equipment as directed by VRE.
- D. VRE shall replace end-user computers used for the performance of said Contract in accordance with VRE's policy to replace end-user computers every four (4) years. VRE shall also replace any end-user computer used for the performance of the Contract that does not meet the Software Vendor's recommended configuration with new hardware.
- E. The Contractor shall anticipate that VRE will upgrade all or portions of the VRE computer network during the Term of the Contract. In such event, VRE shall upgrade all computer equipment and software it has provided as part of this Contract to maintain the ability to interface with the VRE Computer Network and maintain software operations. VRE shall dispose of computer equipment properly in accordance with all applicable laws.



### 9.2.1.1 Routers, Hubs, and Switches

VRE will provide networking equipment to both Broad Run and Crossroads yards and to the VRE warehouse. The networking equipment provided will be used to link VRE's inventory and work management system to connect to the main database server located in VRE Headquarters in Alexandria, VA. This equipment will also be used to provide Internet access to the locations mentioned above.

### 9.2.1.2 Workstations

- A. VRE will provide the desktops and laptops necessary to run applications necessary for the daily processing of work required.
- B. VRE will repair and maintain desktops and laptops that are out of service due to normal wear and tear.
- C. If computer problems are due to abuse and neglect, the Contractor shall repair and/or replace the desktop or laptop.
- D. Desktops and laptops will come pre-installed with an operating system, the Microsoft Office Suite, Internet Explorer, and other software tools needed for intrusion detection, virus protection, work and data management and secure connection to the VRE headquarters network.

### 9.2.1.3 Communications

- A. Internet – VRE will provide Internet service to desktops and laptops being used for VRE related business use only. Internet traffic will be subject to restrictions imposed and set by VRE.
- B. Phone and Fax Lines – VRE will provide phone and fax lines at both Broad Run and Crossroads Yards and the VRE Warehouse for VRE related business use only.
- C. Phone Equipment – VRE will provide phone equipment at both Broad Run and Crossroads Yards. VRE will maintain and replace the phone equipment as necessary.



## 9.2.2 COMPUTER NETWORK CONFIGURATION

### 9.2.2.1 Network Protocol

- A. Servers and applications will be run from VRE's Headquarters in Alexandria. There will be a direct connection from the remote site to Alexandria through frame relay circuits. Internet content will be filtered through a firewall provided by VRE.
- B. Workstations will come pre-installed with the necessary client applications and network configurations.
- C. Email content will be filtered through a firewall provided by VRE. Email content will be backed up and stored both in Alexandria and offsite storage.
- D. Any operational information that is archived in the performance of this Contract that is security or safety sensitive information is stored in a secure site and will be made available to VRE upon request.

### 9.2.2.2 User Management

VRE will provide VRE network login credentials to the necessary personnel.

### 9.2.2.3 Network Security

- A. Login credentials will be required to connect to the VRE network. Credentials will include unique login names and passwords for both the VRE network and the VPN tunnel if working from a remote site. VPN software and configurations will be provided by VRE.
- B. VRE shall provide routers, firewalls, wiring, patch panels and other interconnection equipment at the interface point between VRE supplied software and VRE Computer Network.
- C. The Contractor shall follow "Best-Practice Methods" regarding security for any connection from the VRE supplied software or current work management software to an external VRE network, including connection to a third-party Internet Service Provider or wide-area-network connection to another VRE location. A "Best-Practice Method" is defined as one that follows the recommendations of the server hardware manufacturer and network operating system vendor, in areas including but not limited to routers, firewalls, user permissions, virus scanning, e-mail content filtering and protection of key network passwords.



- D. VRE shall maintain the security methods in a current state at all times throughout the term of the Contract, which will include: applying virus and worm patches at a frequency recommended by the Software Vendor; applying operating system and application software patches at a frequency recommended by the Software Vendor; and modifying policies and procedures as necessary to prevent unwanted human access to any VRE provided software, and the VRE network or to prevent human-initiated events from causing harm to, or preventing the normal operation of any VRE provided software and the VRE network.

#### 9.2.2.4 Availability of Service

- A. VRE shall configure Computer Equipment and software and perform procedures as required to maintain VRE supplied software availability at all times.
- B. VRE shall restore availability of the VRE supplied software or current work management software and its components after a failure or loss of functionality. Maintenance work to restore availability shall be scheduled at times that do not interfere with the provision of the Contract.
- C. Service shall be available at the Broad Run and Crossroads **storage yards** as follows: Computer hardware and applications including the Internet service during operating hours (24-7).
- D. Service shall be available at the **warehouse** as follows: Computer hardware and applications, including the Internet service during operating hours (24-7).

#### 9.2.2.5 Network Operating System Upgrades

The Contractor shall anticipate that VRE will upgrade the VRE network operating system during the term of the Contract. VRE will typically perform these Network Operating System (NOS) upgrades during the weekends or while train service is not running during the week (only if necessary).



## 9.3 INFORMATION SYSTEMS SOFTWARE

### 9.3.1 SOFTWARE PROVIDED BY THE VRE

- A. VRE supplied software or current work management software: VRE will require the use of this software to handle warehouse inventory and work management at the yards. This will come pre-installed on the workstations VRE will be providing.
- B. Microsoft Office Suite: VRE will provide this suite of applications for everyday use in word processing, spreadsheets, and email. This will come pre-installed on the workstations VRE will be providing.
- C. Windows XP or Vista: All operating systems will be pre-installed on the workstations.
- D. Train Diagnostic Software: VRE will require the use of this software to run and acquire diagnostics data. This will come pre-installed on laptops that will be provided by VRE.

### 9.3.2 ELECTRONIC MAIL

- A. The Contractor must use a corporate email system when corresponding with all VRE related email communication. Personal email and free Internet email systems such as AOL, Hotmail, and Gmail may not be used for security reasons.
- B. The Contractor shall set up and enable a secure web access module to their corporate email system such as Outlook Web Access (OWA) so that foreign desktops and remote users may continue to use them at remote locations.

### 9.3.3 USE OF SOFTWARE AND HARDWARE NOT REQUIRED BY THE VRE

- A. The Contractor may use software and hardware to perform administrative functions not specifically required by VRE for the performance of the Contract. Hardware and software provided by the Contractor for the sole purpose of performing these non-specified administrative functions shall remain the property of the Contractor.
- B. The Contractor shall provide all equipment, installation, configuration, wiring infrastructure, and maintenance for hardware and software the Contractor uses solely to perform non-specified administrative functions.
- C. VRE reserves the right to approve any hardware and/or software necessary so that the Contractor may perform any administrative functions not required by VRE. The Contractor shall notify VRE at least two (2) weeks in advance, prior to purchasing any hardware or software that the Contractor is planning to implement for these non-specified administrative functions. Implemented hardware and software without prior approval by VRE will be removed by VRE.



## **9.4 OPERATIONAL REQUIREMENTS**

### **9.4.1 INFORMATION INPUT, STORAGE AND RETRIEVAL**

The Contractor shall use VRE supplied software on a daily basis for the input, storage, and retrieval of information. The Contractor shall record activities including, but not limited to maintenance, inspection, repairs, adjustments, cleaning, and renewals within 24 hours of the completion of each such activity, unless otherwise specified in the Contract.

### **9.4.2 PREPARATION OF REQUIRED REPORTS**

The Contractor shall use VRE supplied software to produce and furnish all required reports whenever necessary. Further information about reporting and a summary of required reports will be provided by VRE.

### **9.4.3 ACCESS TO VRE FACILITIES IN VIRGINIA**

VRE will provide proximity identification cards to allow access to specific VRE facilities located in Virginia. The Contractor shall request authorization by filling out the necessary application form and submitting other items required by VRE. Application for access cards must be submitted five (5) days prior to actual activation date for proper handling of issuance of proximity cards. An electronic copy of the application form will be made available to the Contractor.

### **9.4.4 DATA ACCESS**

The Contractor shall use VRE supplied software and the Office Suite to allow real time access to data. Data access will be secured through VPN tunneling provided by VRE.

## **9.5 BACKUP AND DISASTER RECOVERY**

### **9.5.1 BACKUP**

VRE shall perform all data backup at VRE Headquarters on daily, weekly and monthly frequencies. Weekly and monthly data will be sent offsite for storage and data retention. Daily backup will remain in-house for quick data recovery. Weekly data will be stored and retained for one month and monthly data will be stored and retained for one (1) year. Backup will only be performed on a server level and not on a workstation level. Any data saved on workstations and local hard drives will not be part of the backup system. VRE will not be responsible for any data saved on any local disk storage space used by the Contractor.



## **9.5.2 DISASTER RECOVERY**

### **9.5.2.1 Workstations**

- A. The work management database and email database will be backed up on a server level daily. The weekly and monthly backup will be done on magnetic tape which will be taken off site after the backup procedure is complete.
- B. The Contractor shall contact VRE's IT department for any computer equipment failure so that we can schedule to replace the machine as soon as possible. VRE will have replacement machines ready so that downtime can be minimized.

### **9.5.2.2 Communications**

There are no redundant systems for the communication lines at this time.

## **9.6 OWNERSHIP OF HARDWARE, SOFTWARE AND DATA**

- A. VRE will provide and own all technical and computer related hardware, software and data. VRE reserves the right to request any operational data related to safety and security on the VRE system or remote access to any safety and security data not stored in the VRE network. Additional requests by the Contractor for electronic and technical equipment and its accessories to accommodate for any other work performed shall be made to VRE.
- B. All requests made for any additional equipment shall be approved by VRE prior to purchase and implementation. VRE reserves the right to remove any hardware, software or data purchased and/or implemented without prior approval by VRE.

