

# REQUEST FOR PROPOSAL



## Commonwealth of Pennsylvania Office of Administration / Information Technology

### Appendix D – Proposal Cover Sheet

RFP ISSUE DATE

November 12, 2008

PROPOSAL DUE DATE

January 20, 2009

APPENDIX D

PROPOSAL COVER SHEET

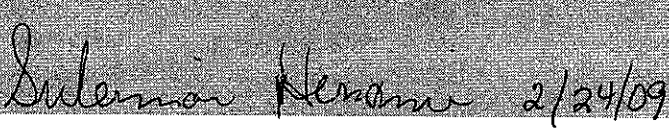
COMMONWEALTH OF PENNSYLVANIA  
Department of General Services

RFP# 6100004339

Enclosed in three separately sealed submittals is the proposal of the Offeror identified below for the above-referenced RFP:

Offeror Information:	
Offeror Name	Verizon Business Network Services Inc. on behalf of MCI Communications Services Inc. d/b/a Verizon Business Services
Offeror Mailing Address	303 Walnut St. Strawberry Sq. 8th Floor Harrisburg, PA 17101
Offeror Website	www.verizonbusiness.com
Offeror Contact Person	Cheryl Caplan
Contact Person's Phone Number	717 777-3960
Contact Person's Facsimile Number	717 777-3576
Contact Person's E-Mail Address	cheryl.caplan@verizonbusiness.com
Offeror Federal ID Number	47-0751768

Submittals Enclosed and Separately Sealed:	
<input checked="" type="checkbox"/>	Technical Submittal
<input checked="" type="checkbox"/>	Disadvantaged Business Submittal
<input checked="" type="checkbox"/>	Cost Submittal

Signature	
Signature of an official authorized to bind the Offeror to the provisions contained in the Offeror's proposal:	
Printed Name	Suleiman Hessami
Title	Vice President Pricing and Contract Management

FAILURE TO COMPLETE, SIGN AND RETURN THIS FORM WITH THE OFFEROR'S PROPOSAL MAY RESULT IN THE REJECTION OF THE OFFEROR'S PROPOSAL



March 3, 2009

Ms. Kay Shaffer  
Department of General Services  
Bureau of Procurement  
Forum Place, 6th floor  
555 Walnut Street  
Harrisburg, PA 17101

Dear Ms. Shaffer,

On behalf of Verizon Business, thank you for the opportunity to submit a proposal to the Commonwealth of Pennsylvania's RFP 6100004339 for Telecommunications Managed Services. Verizon's understanding of the Commonwealth's goals and objectives, combined with our extensive portfolio of services, has enabled us to develop a response that not only will improve telecommunication services cost effectively, but also secure Commonwealth investments.

As a significant contributing corporate citizen in Pennsylvania, Verizon is vested in the success of the Commonwealth, its employees, citizens and business partners. Our ongoing investment in our infrastructure and services brings a vast array of services for the Commonwealth to evolve to over the next few years. You can be assured, Verizon will be here for the long term to support the Commonwealth as it is ready to move on to next generation services.

Verizon Business offers solutions that can make the Commonwealth's day-to-day operations more productive, secure, and cost-effective. We are committed to delivering value in all required service areas while balancing the most appropriate mix of baseline and evolving services.

We are also committed to offering the Commonwealth the personal support you need to select, implement, and manage your communications services. Our customer-focused team, led by the Program Management Office, will help ensure a smooth transition for the Commonwealth agencies to Verizon Business services to improve service level execution, increase agency satisfaction, reduce operational cost, and allow Commonwealth employees to focus on their strategic and customer-focused activities.

Our proposal presents a comprehensive suite of secure solutions to address your requirements and highlights the benefits of selecting Verizon Business as your services provider. We are committed to delivering outstanding value, and we are confident that our strong customer service focus and dedication to the continual improvement of our network and services position us as a strategic communications partner for the Commonwealth for the next seven to ten years.

If you have any questions regarding this proposal, please direct communications to Joann Fake, Regional Sales Manager at 717-777-8680 or [joann.m.fake@verizonbusiness.com](mailto:joann.m.fake@verizonbusiness.com).

Thank you for your consideration.

Sincerely,

Eugene Scott  
Vice President, Verizon Business

Each of these questions require a Reply (Y/N) and there's a 2<sup>nd</sup> column titled Comment.

## **ATTRIBUTES QUESTIONNAIRE**

Question	Y/N	Comments
1. Has the Submitter read, and does the Submitter understand, the terms and conditions of this solicitation?	Yes	
2. Is the offer in accordance with the terms and conditions of this solicitation?	Yes	
3. Do all items offered by Submitter conform to the specifications of this solicitation?	Yes	
4. Were the price(s) and amount arrived at independently and without consultation, communication or agreement - with any other contractor, submitter or potential submitter?	Yes	
5. Were the price(s), amount, approximate price(s) or the approximate amount disclosed to any firm or person who is a submitter or potential submitter?	No	
6. Was an attempt made to induce any firm or person to refrain from responding to the solicitation?	No	
7. Was an attempt made to induce any firm or person to submit an offer higher than the Submitter's offer?	No	
8. Was an attempt made to induce any firm or person to submit any other form of complementary offer?	No	
9. Did the Submitter make the offer in good faith?	Yes	
10. Is a governmental agency investigating the Submitter, its affiliates, subsidiaries, officers, directors or employees? If yes, provide explanation in comment field or as an attachment.	No	
11. In the last 4 years, was the Submitter or its employees found liable for conspiracy or collusion related to any public contract? If yes, provide explanation in comment field or as an attachment.	No	
12. In the last 4 years, was the Submitter's affiliates or subsidiaries found liable for conspiracy related to any public contract? If yes, provide explanation in comment field or as an attachment.	No	
13. In the last 4 years, was the Submitter's affiliates or subsidiaries found liable for collusion related to any public contract? If yes, provide explanation in comment field or as an attachment.	No	
14. In the last 4 years, was the Submitter's officers or directors found liable for conspiracy related to any public contract? If yes, provide explanation in comment field or as an attachment.	No	
15. In the last 4 years, was the Submitter's officers or directors found liable for collusion related to any public contract? If yes, provide explanation in comment field or as an attachment.	No	
16. Is the Submitter currently under suspension by the federal government or any state or local government? If yes, provide explanation in comment field or as an attachment.	No	
17. Is the Submitter currently debarred by the federal government or any state or local government? If yes, provide explanation in comment field or as an attachment.	No	
18. Do offered items meet EPA-established minimum percentage levels for total recycled content and post-consumer recycled content? If no, provide explanation in comment field or as an attachment.	No	
19. Does the Submitter have any delinquent obligations to the Commonwealth not being contested on appeal? If yes, provide explanation in comment field or as an attachment.	No	
20. Does the Submitter understand that all information submitted and representations made are material and will be relied upon by the Commonwealth in award?	Yes	
21. Does the Submitter understand that any false statement that Submitter does not believe to be true or any writing, sample, specimen, map or other object that Submitter knows to be false shall be punishable under Section 4904 of Title 18 Pa. C. S?	Yes	

22. Does the Submitter authorize a Commonwealth agency to release Submitter's, tax information to any contracting Commonwealth agency?	Yes	Verizon agrees the tax authority could release taxpayer information to the extent it is not prohibited by law
23. Does the Submitter agree that the offer submitted electronically through the Commonwealth's system shall be deemed signed by the Submitter.	Yes	
24. Does the Submitter agree that the electronically submitted offer is legally binding and enforceable and that no writing shall be required to make this offer or any resulting contract or purchase order legally binding?	Yes	
25. Does the Submitter agree that the electronic offer, if introduced as evidence on paper, is admissible as a business record originated and maintained in paper form?	Yes	
26. Does the Submitter agree that if a change or error in an offer occurs in a transmission, the Submitter shall immediately notify the Commonwealth of the change or error?	Yes	
27. Does the Submitter acknowledge responsibility for current & complete supplier registration information and that the Commonwealth is not responsible for any delays in payment or communication resulting from inaccuracies provided by the Submitter?	Yes	
28. I have indicated my name and title in the comment space provided and represent that I have full authority to submit this response on behalf of Submitter and to bind Submitter to its contents.	Yes	
29. If awarded a Contract, does Submitter agree to sell/provide the awarded items/services at the same prices and/or discounts, and in accordance with the contractual terms and conditions, to registered COSTARS Purchasers?	No	Verizon will negotiate contract pricing, for CoStars purchasers, at the time of contract award.
30. DOES SUPPLIER COMMIT TO USE DGS CERTIFIED MBES AS SUBCONTRACTORS OR SUPPLIERS? SUPPLIER MUST SELECT THIS BOX AND ENTER THE SPECIFIC % COMMITMENT. THE COMMITMENT IS BASED ON THE TOTAL CONTRACT VALUE. IF LESS THAN 5%, REFER TO IFB FOR FURTHER INSTRUCTION.	Yes	
31. DOES SUPPLIER COMMIT TO USE DGS CERTIFIED WBES AS SUBCONTRACTORS OR SUPPLIERS? SUPPLIER MUST SELECT THIS BOX AND ENTER THE SPECIFIC % COMMITMENT. THE COMMITMENT IS BASED ON THE TOTAL CONTRACT VALUE. IF LESS THAN 3%, REFER TO IFB FOR FURTHER INSTRUCTION.	Yes	

## II-1. Executive Summary

*The Executive Summary should be written to communicate to the Commonwealth executive management team. The Offeror should summarize its offering, its approach and the value provided by the Offeror. Additionally, this should include any major features, functionality, or areas of support crucial to the Commonwealth achieving and exceeding its stated goals in this RFP. The Commonwealth is not looking for a generic or boilerplate approach, but rather for a description of how the Offeror would approach the scope of work at the Commonwealth specifically and why and how the Offeror will be able to achieve all stated goals and objectives. The overall process this project will follow is important to note. The inherited responsibilities will be constantly evolving. The Commonwealth is looking for an Offeror who understands it will be inheriting a network "as is", it will propose a new model of approach with direction, and then it will propose how it will get there, ensuring constant process improvements at all times. This will include realistic timelines and pricing across the scope of the project. The Offeror must not, under any circumstances, include any financial information or estimated savings in the Executive Summary.*

### Verizon Response

#### Introduction

Verizon is uniquely positioned to respond to the Commonwealth of Pennsylvania's Request for Proposal for Telecommunications Managed Services. Verizon is a major provider of the services requested in the RFP within Pennsylvania and in the global marketplace.

Verizon's offer provides the broad spectrum of managed voice, data, security, and Internet services needed to meet current and future Commonwealth requirements. Verizon will provide the Commonwealth end-to-end facilities-based solutions completely managed and maintained by Verizon. Verizon's highly skilled team, coupled with its extensive history working with the Commonwealth, will help ensure a smooth, relatively transparent transition. In addition to supporting and enhancing the services specifically requested in this RFP, Verizon will work with Commonwealth executive, program, and technical management on a strategic approach for evolution to the next generation of IP-enabled network services.

Verizon has a long history of effective business partnership with the Commonwealth. Verizon has invested heavily in state infrastructure and will continue to do so in the future. Verizon's financial stability and its experience providing managed services to Fortune 500 companies provide the Commonwealth with a safe, secure, and dependable business partner capable of navigating through periods of economic uncertainty and business failures.

## Verizon Offering

Verizon operates one of the most advanced, reliable and broadband-capable wireless and wire-line networks in the world. Verizon's solution for the Commonwealth leverages this network portfolio of shared services, facilities and personnel to provide a smooth, low-risk transition, fault tolerant operational performance, continuing process improvement and a path for technology evolution.

The Verizon offering is both scalable and extensible. As it leverages the existing Verizon network, the Commonwealth is not required to pay for costly infrastructure upgrades or make specific commitments for evolution. Services and solutions can be implemented at the enterprise or agency level as determined by business circumstances. Agencies can evolve from traditional telecom services to enhanced, converged voice and data services that operate over a secure voice-enabled IP network. Verizon's portfolio of service offerings is outlined in summary form below:

- **Voice Services.** Verizon proposes the use of Centrex for the initial voice services transition. Centrex provides a cost-effective solution that is familiar to agency personnel. Verizon is prepared to deliver voice-enabled IP services to agencies at their defined pace. The Department of Health will be transitioned immediately to a hosted VoIP solution.
- **Data Networking.** Verizon will deliver a cost-effective solution that upgrades the Commonwealth's network from a legacy Frame Relay and ATM data network to a robust Multi-Protocol Label Switching (MPLS) network—also referred to as Verizon's Private IP (PIP) network. This network supports advanced technologies, such as Hosted IP Centrex (HIPC), and will provide significant long-term cost savings, user friendliness and flexibility. Verizon's network is uniquely designed to support all of the Commonwealth's communications requirements (data, voice, and video) on a single infrastructure.
- **COPANET.** Verizon's design incorporates the existing COPANET fiber network, thereby leveraging current Commonwealth asset investment. Two sites on COPANET in Harrisburg have direct connectivity to the existing ATM network. Verizon will connect these sites as a first step in bringing COPANET into the Verizon PIP network. Verizon's design includes installation of four 1-Gb Ethernet circuits at 1 Technology Park and four 1-Gb Ethernet circuits at 400 North Street.
- **Internet.** Verizon will deliver diverse, redundant, and secure Internet services. The solution for the Commonwealth provides load balancing from two geographically separate locations and two separate providers to provide redundancy with high availability firewalls and fully mirrored security configurations.
- **Managed Security.** Verizon's Security solution includes high availability firewalls, Intrusion Prevention Service, VPN, Email Scanning, Authentication, Remote Access Services and Web Content Filtering. These Security services are managed by a fully staffed, 365x24x7 Security Operations Center (SOC).

- **Managed Network Services.** Verizon will provide a mix of either enterprise or agency network managers as needs are defined by the Commonwealth. Verizon will work with the Commonwealth to provide the desired level of support. A dedicated agency network manager may be appropriate for large agencies with complex network management functions. Smaller agencies may elect to share a network manager or have their networks managed by the central authority or the Office of Information Technology.

In addition to network managers, Verizon will provide state-of-the-art network management tools and practices. At the core of Verizon's Managed Services infrastructure is *the Integrated Management Platform for Advanced Communications Technologies* (IMPACT). IMPACT is a real-time monitoring and control system that Verizon will use to provide 24x7 proactive monitoring of Commonwealth agency LAN and WAN devices.

## Verizon Approach

### Overview of Proposed Implementation/Transition Plan

Verizon will deliver its service management framework based on a proven approach to governance by leveraging a Program Management Office (PMO) dedicated to providing the Commonwealth the following:

- A single source of accountability
- An integrated approach to managing professional services activity
- Streamlined administration of third-party vendor management
- Consolidated reporting

As a single-source facilities-based provider, Verizon can provide the accountability the Commonwealth demands. This helps to ensure that the Commonwealth will have only one place to turn for service turn-ups, troubleshooting, Moves/Adds/Changes (MACs), and other day-to-day services. This completely eliminates the finger pointing that occurs in multi-provider scenarios. Verizon's proposed solution for the Commonwealth's telecommunications environment is further supported by best practices from industry-recognized bodies of knowledge, such as ITIL, ISC2, PMI, DRI, and SDLC.

Verizon's approach to transition begins with detailed planning. This team will be led by a seasoned transition services staff, which will interface with the Commonwealth's key program personnel to identify key milestones and service turn-up dates. During the transition of the legacy environment to Verizon, Verizon will initiate a transformation planning phase to optimize networking solutions and will create a technology plan and roadmap for transformation. The plan will include the following:

- Network designs
- Technology architecture
- Re-designed processes



- A technology refresh strategy
- An operational delivery model
- A governance process

A major deliverable during transformation is the agreed-upon implementation schedule for the new managed telecommunications services. Once Verizon and the Commonwealth achieve joint agreement, Verizon will employ a specialized team to coordinate the following:

- Implementation activities to include site surveys
- Communicating planning activities
- Establishing acceptance and back-out criteria
- Ordering appropriate site equipment and transport
- Tracking change management
- Coordinating activities with site contacts and the implementation team

Verizon is managing several of the Commonwealth's agencies in the Verizon management NOC, which will allow a smoother transition of the remaining services. Verizon is prepared to protect the Commonwealth's network information and has developed detailed recovery scenarios to be ready in case of disasters and national emergencies.

Verizon will provide steady-state support of remaining managed telecommunications services as these services are transitioned. Verizon's steady-state support model delivers consistent and efficient management of services through centralized oversight and control relying heavily on a contingent of Pennsylvania-based resources that include, among others, a Verizon management NOC already supporting the Commonwealth and a Commonwealth-dedicated Help Desk. Verizon's skilled and experienced service delivery teams support all aspect of management including the following:

- Incidents
- Fault isolation
- Problem/trouble resolution
- Configuration management
- Change management
- Overall governance

## Verizon Value

### Meeting the Commonwealth's Goals and Objectives

Verizon has a proven record of bringing the benefits of advanced communications to organizations throughout the world and looks forward to aligning these world-class services to further the goals and objectives of the Commonwealth. The use of in-place assets avoids the expense, the delay and risk of the Commonwealth's growing its own infrastructure. The use of Verizon's infrastructure by multiple branches of government and the private sector constitutes a clear example of shared use.

The Commonwealth as a whole—both state and local governments and the private sector—will benefit from Verizon's continued investment in its local and global data and voice networks. Toward this end, Verizon has mapped out an aggressive growth plan for 2009, especially in fiber optic and wireless infrastructures.

### Why Verizon

Verizon is in a superior position to provide technologically sound and cost-competitive solutions given its market penetration of the shared service marketplace. Verizon has a proven, successful track record in this market space. Verizon serves 98 percent of Fortune 500 companies and numerous federal, state and local government organizations.

Verizon is experienced with **meeting unique requirements of governments** for secure, fault-tolerant networks. Verizon customers with demanding, dynamic, and mission-critical network requirements include the following: The US Navy, Social Security Administration, United States Postal Service, and the State of West Virginia. Within the Commonwealth of Pennsylvania, Verizon provides telecommunications services to a variety of state agencies, local governments, K-12's and state related universities.

Verizon is a respected authority and provider of industry-leading security products. Verizon has a long history in the cyber security marketplace, with an association with ICSA Labs, independent division of Verizon Business, headquartered in Mechanicsburg, Pennsylvania. In recent years, Verizon has significantly enhanced its leadership position in cyber security by acquiring several security companies, such as NetSec, UUNET, Digex, and Cybertrust.

The **financial stability** of a key partner is a critical factor for decision makers in today's uncertain, deteriorating economic climate. Verizon brings the strength of a Fortune 20 company with revenues exceeding \$90 Billion, assets of \$186 billion and a stock price that has weathered the economic tsunami in the fourth quarter of 2008 and the first two months of 2009. Verizon is here today and will be providing service to millions of Pennsylvanians very far into the future.

Verizon endorses the Commonwealth's decision to pursue a managed telecommunications services solution. Verizon concurs with this strategic direction and supports the Commonwealth's goal of implementing consistent managed services across the agencies. **Verizon** believes its approach is far and above the best in providing the Commonwealth the following **benefits**:

- **Single Point of Accountability** – Verizon will be the primary interface for all services provided in this proposal. Commonwealth management will be relieved of the necessity for third-party vendor management and coordination, including non-Verizon ILECs.
- **End-to-End Ownership** – Verizon, as an experienced local exchange provider in Pennsylvania, owns the transport critical to meeting the Commonwealth's needs.
- **Financial Strength** – Verizon is financially strong and will continue to make significant investments in its services that will ultimately benefit the Commonwealth.
- **Experience** – Verizon's extensive experience and institutional knowledge of Commonwealth operations supports the integration and management of complex communication solutions. This allows the Commonwealth to control its IT investments, minimize technology risk, and optimize technology solutions as needed.
- **Network-Enabled Solutions** – Verizon has the ability to provide the Commonwealth with next-generation voice, data and business application solutions to transform the way agencies deliver services to Pennsylvania constituents.
- **Ease of Transition** – Verizon has the experience and resources to transition the Commonwealth's services expeditiously and cost effectively.
- **Verizon Code of Conduct** – Integrity, respect, performance excellence, and personal accountability—these are the core values of Verizon employees.

Verizon, as stated previously, believes it is in a unique position to meet the specific requirements of this RFP and to provide an evolutionary path to a next-generation network. A fundamental paradox of information technology in today's world is that technology changes and economic upheavals can occur at any time. Any long-term contract for managed services must provide an **agility and flexibility of response** to accommodate unplanned changing circumstances. Verizon believes that it has proven itself to be a strong, stable partner of the Commonwealth in the past and is best able to address any and all future contingencies. More specifically, some theoretical examples follow:

- **Evolving Technology** – As technology evolves, market pressures will require Verizon to create new and enhanced service offerings. The Commonwealth could then access these new services without the delay and cost of self-development.

- **Service Assemblies** – The scope of in-place Verizon services and skill sets could be combined and packaged in an unlimited number of ways to meet specific business solutions. These could be created *just in time* as the business need arises. For example, various security and mobile networking solutions could be combined to provide mobile communication services to first responders.
- **Cloud Computing** – There appears to be an emerging movement away from data center-centric to dispersed cloud computing whereby specific application services can be executed over the network. Indeed, this is the promise of IP-enabled networking. The real-world operation of such a concept, however, will require response time and security monitoring for SLA compliance. Although the specifics of the performance and security needs for cloud computing are not completely clear today, it is obvious that Verizon, more than most other vendors, possesses the depth and breadth of services to assemble a solution.
- **Virtualization** – As is the case with business and governments today, the Commonwealth recognizes the multiple challenges it faces with rising energy costs and pressure to improve performance and efficiency. At the same time the Commonwealth is also dealing with increased computing demand as applications become more complex and require additional computing power. Virtualization can help streamline operations and improve efficiencies. Verizon offers a broad array of virtualization consulting and management services to assist the Commonwealth in implementing a virtual environment for all or part of its network.
- **Pandemics Planning and Business Continuity** – Verizon has a mature, well developed crisis management organization to respond to disasters anywhere they occur within Verizon's service area. Verizon conducts scenario-based exercises internally at least annually, often relying on simulations of real-world events as the foundation for development of the exercise content (e.g., bombings and pandemic influenza). Verizon tests both technology recovery as well as crisis leadership—thereby helping to ensure good decision making under pressure, effective resource management, and communication with internal teams and external organizations. Redundancy and resiliency are core elements of the Verizon network, and Verizon develops its products and services to withstand disaster scenarios.

## Verizon's Commitment to Pennsylvania

Verizon is not only firmly committed, but has roots within the Commonwealth of Pennsylvania. The proposed voice and data services for the Commonwealth will create a new demand for customer service support within Pennsylvania, thereby creating new jobs and opportunity for Pennsylvania citizens. As part of Verizon's commitment to this opportunity, Verizon will leverage the knowledge and expertise of several Pennsylvania-based Disadvantaged Business Partners throughout the life of this contract.

Verizon's commitment to Pennsylvania extends beyond this opportunity. Verizon currently employs over 16,000 dedicated people in the Commonwealth and pays an estimated \$10 million in taxes annually. Verizon serves the citizens of the Commonwealth with almost 5 million telephone lines and 1.7 million fiber optic miles

throughout Pennsylvania. Verizon has contributed \$34.3 million to Pennsylvania's state e-Fund. The award-winning FiOS service is available in over 300 communities and continues along a path of aggressive expansion.

Verizon believes in the spirit of giving back to the communities where its customers and employees live and work, as demonstrated by several partnerships and programs local to Pennsylvania. This deep sense of community involvement is rooted in the foundation of one of the company's greatest strengths—its employees. Verizon employees and retirees have volunteered over 40,000 hours and raised over \$1.1 million for non-profits in the Commonwealth.

Verizon's commitment to volunteerism and fund raising efforts in Pennsylvania includes the following examples:

- Allegheny County Library Association in Pittsburgh "Summer Reading Program"
- National Constitution Center in Philadelphia "Living News Program"
- PA Department of Education "Verizon Thinkfinity Rollout Partnership"
- PA Library Association "PA One Book; Every Young Child"
- Police Athletic League of Philadelphia "Boys to MENtoring Program"

## Conclusion

Verizon has the network, technology, expertise, and the people required to provide high quality competitively priced managed services to the Commonwealth and to provide a path for evolution to the next generation of IP-enabled networks and services.

Verizon is uniquely positioned to respond to the Commonwealth of Pennsylvania's RFP being a major provider of the requested services both within Pennsylvania and in the global marketplace. Partnership with Verizon provides the Commonwealth access to the depth and breadth of Verizon's technology solutions and expertise.

In closing, Verizon has a demonstrated history of successful business relations with the Commonwealth and possesses a significant amount of institutional knowledge of current environments, governance structures, and administrative procedures. Verizon understands and respects business and policy requirements beyond technology. Verizon will continue to work with the Commonwealth in both good and bad economic times to help ensure the Commonwealth's success.

## II-2. Technical Solution

***Describe in narrative form the technical plan for accomplishing the work. Use the service requirements described in Exhibit C of this RFP as the reference point.***

***The Offeror must provide, as a separate Microsoft Word document, a thorough description of its technical solution and overall approach. This file must be entitled "Offeror-Name Technical Solution Document.doc". No appendices or additional information associated with the Technical Solution Document will be accepted unless otherwise indicated below.***

***The description of the technical solution should be written to communicate to the Commonwealth technical and management staff. The descriptions should contain sufficient detail for the Commonwealth to understand the overall approach, key changes, and timeframe associated with the Offeror's solution.***

***The Offeror will include materials specific to its solution for the Commonwealth. The Offeror will refrain from providing "marketing materials" and background information already provided to the Commonwealth, or otherwise available in the public domain.***

***All information provided in the Technical Solution Document MUST be consistent with the commitments agreed to in other portions of this RFP. If there is any discrepancy and at the Commonwealth's option, the answers provided by the Offeror in the Appendices and Exhibits will supersede the Technical Solution Document.***

***Offerors are encouraged to use diagrams within this document to further explain their solution.***

***The Technical Solution Document must contain the following components in the order specified below.***

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## Technical Solution Overview

*The first section of the document will be a Technical Solution Overview. This section should begin with an overall view of the technical solution and operational approach of the Offeror. The Offeror should summarize its offering, its proposed changes to the organization and/or environment, the overall approach and the value provided by the Offeror.*

*The Offeror should include any planned improvements in tools and processes and expected dates that these improvements will be implemented.*

*NOTE: Detailed information containing the specific steps, resources, and plans associated with the transition of the services and implementation of new tools and processes should be described in the Offeror Transition Plan, as described below.*

### Verizon Response

#### Summary of Offering

Verizon's offer provides the broad spectrum of managed voice, data, security, and Internet services needed to meet current and future Commonwealth requirements. Verizon will provide the Commonwealth end-to-end facilities-based solutions completely managed and maintained by Verizon. The solution includes a plan for the Commonwealth to evolve to Verizon's Multi-Protocol Label Switching (MPLS) network—also referred to as Verizon's Private IP (PIP) network.

Verizon's highly skilled team, coupled with its extensive history working with the Commonwealth, will help ensure a smooth relatively transparent transition. In addition to supporting and enhancing the services specifically requested in this RFP, Verizon will work with Commonwealth executive, program, and technical management on a strategic approach for evolution to the next generation of IP-enabled network services.

Verizon operates one of the most advanced, reliable and broadband-capable wireless and wire-line networks in the world. Verizon's solution for the Commonwealth leverages this network portfolio of shared services, facilities and personnel to provide the following:

- A smooth, low-risk transition
- Fault-tolerant operational performance
- Continuing process improvements
- A path for technology evolution

The Verizon offering is both scalable and extensible. Since it leverages the existing Verizon network, the Commonwealth is not required to pay for costly infrastructure upgrades or make specific commitments for evolution. Services and solutions can be implemented at the enterprise or agency level as determined by business circumstances. Agencies can evolve from traditional telecom services to enhanced, converged voice and data services that operate over a secure voice-enabled IP network.

The scope of Verizon's solution provides LAN, WAN, Wireless LAN, Internet, Security, Centrex, Web Center (ACD), VoIP, Pay Phone, Help Desk, Program Management and Managed Services. Verizon has engaged Disadvantaged Business Partners (MBE/WBEs) in Pennsylvania to provide necessary services through the Program Management Office (PMO). The PMO will manage the MBE/WBE services that include Help Desk, Customer Service, and Third-Party Vendor Management.

## A "Commonwealth" Perspective

Verizon's approach creates a statewide solution that replaces multiple providers and third-party contracts. Verizon's reach and breadth of offered services provides a single vendor, comprehensive solution for the Commonwealth.

Verizon has developed a tailored solution for the Commonwealth that provides a managed service option combining transitional pricing, per-unit pricing on some solution options, and optional components. Verizon's goal is to give the Commonwealth the most flexibility possible in selecting the combination of services for the solution that best fits the Commonwealth's requirements, while addressing all specified concerns.

Verizon's statewide perspective has created a unified network environment for the Commonwealth that includes the following:

- **Data Networking.** Verizon will deliver a cost-effective solution that evolves the Commonwealth's network to a robust MPLS network able to support advanced technologies, such as Hosted IP Centrex (HIPC), that will provide significant long-term cost savings, user friendliness and flexibility. This network is uniquely designed to support all of the Commonwealth's communications requirements (data, voice, and video) on a single network.
  - Internet Services. Verizon will deliver diverse, redundant, and secure Internet services. The solution for the Commonwealth provides load balancing from two geographically separate locations and two separate providers with high availability firewalls and security configurations.
  - Managed Network Services. Agencies have the option of selecting Verizon Managed Network Services (MNS) with data networking. If Verizon MNS is selected, Verizon will provide a mix of either enterprise or agency network managers as needs are defined by the Commonwealth. Verizon will work with the Commonwealth to provide the desired level of support. A dedicated agency network manager may be appropriate for large agencies with complex network management functions. Smaller agencies may elect to share a network manager or have their networks managed by the central authority or the Office of Information Technology.

- In addition to network managers, Verizon will provide state-of-the-art network management tools and practices. At the core of Verizon's Managed Services infrastructure is *the Integrated Management Platform for Advanced Communications Technologies* (IMPACT). IMPACT is a real-time monitoring and control system that Verizon will use to provide 24x7 proactive monitoring of Commonwealth agency LAN and WAN devices.
  - Managed WAN
  - Managed LAN
  - Managed Wireless LAN
- **Managed Security.** Verizon's Security solution includes both Enterprise and Agency configurations. Enterprise security includes high availability firewalls, Intrusion Prevention Service, VPN, Email Scanning, Authentication, Remote Access Services and Web Content Filtering. Individual firewalls are available for agency Security configurations. These Security services are managed by a fully staffed, 24x7x365 Security Operations Center (SOC).
  - Firewalls
  - Intrusion Prevention Services (IPS)
  - Web Content Filtering
  - Remote Access Services (RAS)
  - Virtual Private Networking (VPN)
  - Email Scanning
  - Authentication (Two factor – Active Directory)
- **COPANET.** Verizon's design incorporates the existing COPANET fiber network, thereby leveraging current Commonwealth asset investment. Two hub sites at 1 Technology Park and 400 North Street on COPANET will have direct connectivity to the Verizon PIP network. Verizon will connect these sites as a first step in bringing COPANET into the Verizon fiber network. Verizon's design includes installation of four 1-Gb Ethernet circuits at 1 Technology Park and four 1-Gb Ethernet circuits at 400 North Street.
- **Voice Services.** Verizon proposes the use of Centrex for the initial voice services transition. Centrex provides a cost-effective solution that is familiar to agency personnel. Verizon is prepared to deliver voice-enabled IP services to agencies at their defined pace. Verizon will transition the Department of Health immediately to a hosted VoIP solution.
  - Centrex
  - Web Center (ACD)
  - Voicemail and Messaging Services
  - Long Distance, Toll Free, Enhanced Call Routing (ECR)

- 411, Directory Listing
- Payphones
- **Disaster Recovery.** The inherent redundancies built into the Verizon network architecture design provide for a high level of disaster recovery. Even with these built-in redundancies, a catastrophic failure of a maintenance facility is also a serious consideration in disaster planning. In preparation for such an event, Verizon's maintenance centers are designed for maximum reliability. At every location, Verizon's centers are protected by diverse, dual-fed, un-interruptible power sources (UPS), diverse SONET (OC-48) fiber feeds, and 24x7x365 security coverage.
- **System Management Services.** Verizon is proposing to utilize its breadth of proven service management platforms to deliver like-for-like capabilities of the existing CTMS platform. The components being proposed leverage industry standards and continue to be designed and built to support Verizon's customers' large scale, mission-critical business applications. Verizon's solution consists of three fundamental domains: a Service Desk, a Custom Web-based portal, and an integrated service management platform.
- **Program Management Office (PMO).** Verizon has proposed a Service Delivery Model to lead, manage, and support all products, services, partners and teams in delivering its solution to the Commonwealth. A cohesive partnership between Verizon's Account Team, Service Management Team and PMO, all dedicated to the Commonwealth, will drive the success of Verizon's solution and build continued trust and relationship with the Commonwealth. The Verizon PMO will be fully staffed with dedicated personnel that will be hired and/or appointed following contract award. It is Verizon's intention that personnel hired to fulfill the commitments of the PMO will be appropriately skilled, experienced and educated in accordance with the key position requirements outlined in the RFP.
  - General Contractor Project Management
  - Incident Management
  - Transition Management
  - Operations Management
  - Financial Management (Billing)
  - Change Management
  - SLA Management
  - Third-Party Vendor Management
  - Disadvantaged Business Partner Management

By transitioning the Commonwealth to an MPLS core network, Verizon provides the technology required to consolidate unnecessary or redundant services embedded in the current network. In the past, performance, reliability and security concerns resulted in multiple agencies in the same region, campus or building ordering

individual data circuits to support their specific applications. This often resulted in low utilization levels and increased costs. Verizon will provide the infrastructure necessary to ensure agency performance and security over shared facilities, thus reducing costs and administrative overhead. Verizon will use the tools and expertise provided in this proposal to identify and consolidate existing infrastructure and to eventually move all network applications (voice, data, video and other IP applications) to the Commonwealth's cost-effective, shared MPLS backbone.

Consolidation, standardization and reuse of technology infrastructure are important objectives that Verizon used to design the Commonwealth solution. Verizon will work with the Commonwealth to build a manageable and secure environment. Different agencies have different needs, from the Department of Public Welfare, Pennsylvania State Police, the Department of Transportation, the Department of Health, or the mobile user who needs to take advantage of whatever connection medium is available.

The Verizon architecture and support infrastructure provides the necessary tools for the Commonwealth today while Verizon's approach for the Commonwealth's future leverages enhanced communications and new technologies. With a fully converged solution, Verizon's innovative any-to-any architecture is designed to provide assured application delivery with coverage for any agency location or data center, while not requiring fork-lift CPE upgrades. Verizon's advanced systems and management tools are helping to increase productivity and operational efficiency with state-of-the-art communications for voice, data, wireless, security, help desk, program management, and managed services.

### **Continuous Improvement for Commonwealth Agencies**

The Verizon team understands the value of training, and Verizon has a long history of providing training to government customers. Over the years, Verizon has provided training on virtually all types of technology. Verizon has trained end users as Verizon has moved into new technologies or transitioned from one type of service to another.

Verizon's training plan in support of the Commonwealth's Telecommunications Management Services will be facilitated by a dedicated trainer who will support the course development and documentation specific to the Commonwealth's needs. The trainer will be able to conduct on-site training and assist agencies with choosing training that best fits their needs.

Verizon will provide training that will help Commonwealth agencies use Verizon products, services and tools most effectively. End user and administrative training will be available, where applicable. User guides for Verizon's training classes will also be available online for users to download for reference.

Several delivery methods are available to provide training in order to meet the varied needs of the agency users. Verizon will provide the following training options for the Commonwealth:

**Instructor-Led Virtual Classroom Courses**

The Virtual Classroom classes are Web-based interactive sessions presented by Verizon trainers on a variety of products and services. The virtual classroom courses will be posted on a calendar for users to pre-register and will be offered daily in the morning and afternoon.

**On-Demand/Tutorial Courses**

On-Demand/Tutorial training is available 24X7 on a variety of Verizon products and services. Users simply log-in, turn on the audio and click playback. On-demand courses are particularly useful when working hours are not conducive to attending the live, instructor-led training. Recorded trainings will be added on a regular basis to the catalog, so users can continue to expand their knowledge on the use of Verizon services.

**On-Site Training**

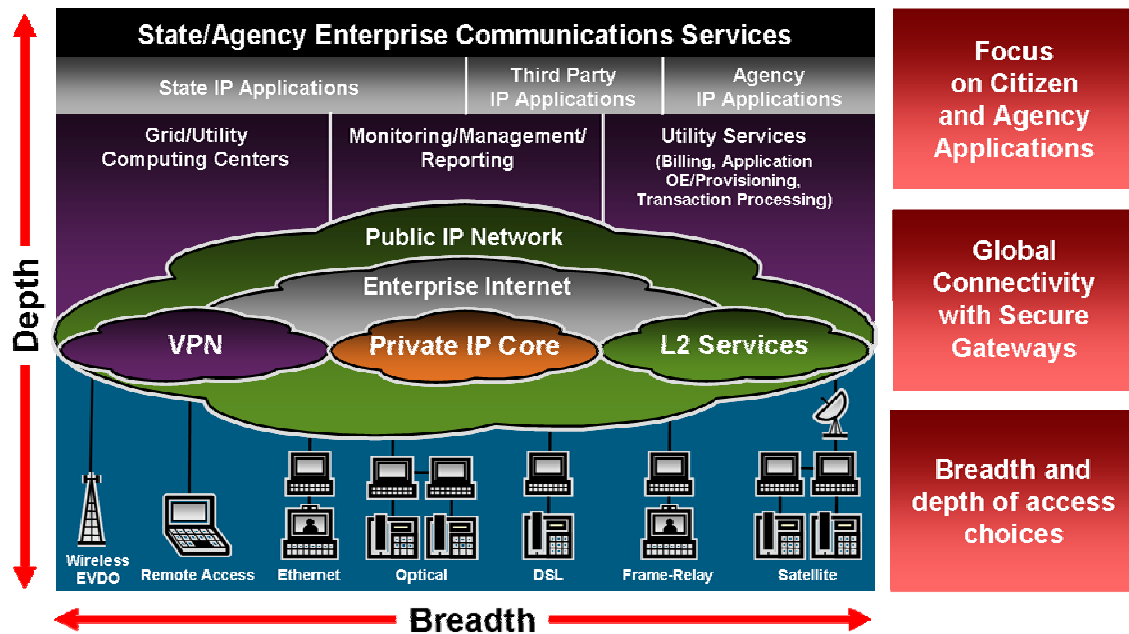
When appropriate, on-site classes will be available for agencies by submission of a training request to Verizon at least 10 business days prior to the requested date. Classes will be conducted at the customer location for classes with at least 10 students participating. Train the trainer options are also available under the Verizon training program.

Verizon will provide a comprehensive training program for its proposed Telecommunications Management System. Training will include instruction on all facets of the Verizon portal for accessing information on products and services, ordering, billing, repair and trouble ticket information. Verizon will offer several classes for users to take online either via instructor-led virtual classes or as on-demand classes.

**Data Communication Services**

With Verizon's statewide solution, all network sites will connect to the Private IP (PIP) network when they are installed. To ease transition, Verizon analyzed the location and bandwidth requirements to determine the optimal access method. Access was optimized to minimize access costs. Verizon will use Frame Relay and Ethernet access methods to connect sites to the PIP network. Other access methods are available to meet the Commonwealth's needs as agencies evolve.





### Verizon's Any-to-Any Network Architecture

Verizon's solution replaces Commonwealth High-Capacity ATM circuits with highly scalable, resilient, and efficient Ethernet access circuits. With the fast development of IP technologies, ATM technology, with its many limitations, does not meet the Commonwealth's needs. The cell tax, along with the segmentation and reassembly (SAR) overhead of ATM, limits the transmission efficiency and the capacity of the Commonwealth's core network. ATM also has difficulty supporting multicast services, thus making it challenging to deploy new IP services.

Verizon's deployment of Ethernet includes significant productivity gains, optimized performance and cost efficiencies. Utilizing Ethernet, Verizon can deliver greater bandwidth flexibility, thereby enabling the Commonwealth to run data intensive and/or real-time applications between sites at a wide range of speeds. Bandwidth upgrades can be configured easily, remotely and at short notice, to meet evolving Commonwealth needs. Ethernet removes needless and expensive layers of network management, thereby reducing maintenance and upgrade overhead.

Verizon's MPLS network is ready to support the Commonwealth and to help the Commonwealth evolve its current network to a Private IP MPLS network that has 20 core switches located in four nodes across Pennsylvania. Access to this network is achieved using the 68 Ethernet switches deployed throughout Pennsylvania. The Private IP network has 647 Cisco switches deployed with 542,964 ports, and 325,838 ports in use. These switches are a combination of Cisco ESR 10008 and GSR 12816 switches.

Commonwealth agencies will access the Internet (public IP) across the PIP network through two geographically diverse Internet hub locations. There will be dual Internet access circuits at each hub location, and each hub will be provided by a different carrier. The result will be carrier diversity across geographically diverse locations.

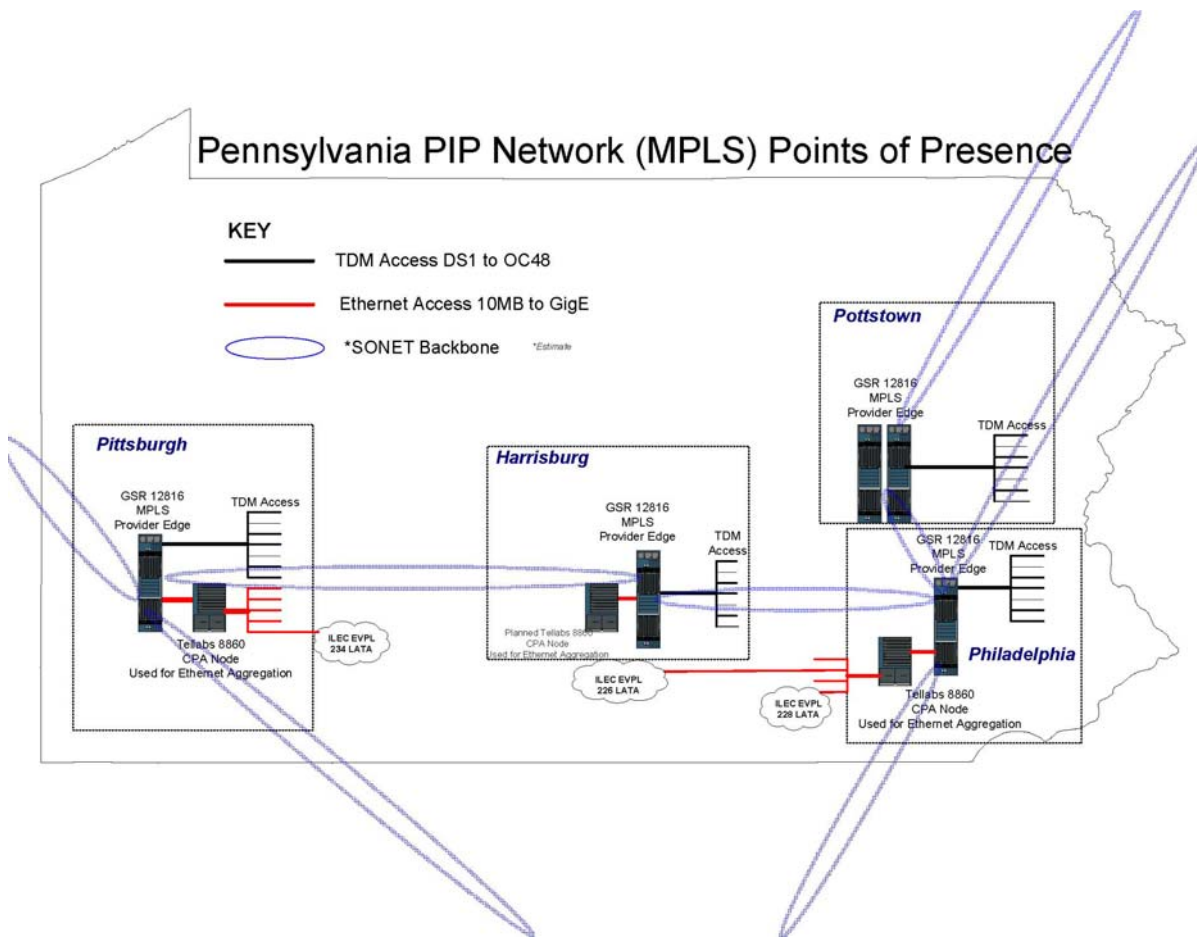


Internet hub locations will house redundant security services with firewalls configured in high availability mode. Security services at each hub include firewalls, IPS, Web Filtering, VPN, and the routers and switches to support the Internet and PIP network connections.

### Architecture - MPLS Leadership – “It’s the Network”

One guiding principle for the Office of Administration/Office of Information Technology is to “reuse technology infrastructure and services.” In keeping with this principle, Verizon has extensive Frame Relay and Ethernet assets in Pennsylvania. These assets provide a method to connect the Commonwealth’s sites to the Verizon PIP network while lowering transition costs and reusing existing infrastructure.

The architecture has at its core the Verizon Global PIP Network, an application aware, MPLS-based network. For locations needing full DS1, direct access is used to connect to the PIP Network. Managed services and network-centric applications are cloud-based services. A single PIP network is a critical building block in the Commonwealth’s evolution from its existing Frame Relay and ATM (FRASI)-based WAN architecture to the any-to-any environment being proposed by Verizon.



PIP Nodes with PEs in Pennsylvania

This document contains Verizon material that shall not be disclosed, duplicated, or used for any purpose other than to evaluate this proposal.

By providing a hybrid design of Frame Relay and Ethernet to MPLS, the Commonwealth has a multi-method path to a single PIP infrastructure that enables network evolution. Verizon has extensive MPLS facilities in Pennsylvania. To expand the commitment to the Commonwealth, Verizon will invest in additional network facilities in Pennsylvania to provide additional MPLS and Ethernet services. These investments facilitate transition to a policy-based, application-aware, application-enabled network in more local markets. This architecture facilitates the flexibility to address the Commonwealth's network needs now and in the future as the Commonwealth's business needs change. The architecture enables the following:

- More rapid introduction of emerging technologies
- Just-in-time technology migration based on operating necessity, agency decision, and specific program funding
- A utility-based service model (ARC/RRC service)
- Right-sizing of network and associated equipment for each site type
- Engineered service level performance to optimize resource utilization

### **Future Innovation**

The Commonwealth's Private IP network solution supports Quality of Service (QoS) on all edge devices as required by the Commonwealth. As the Commonwealth evolves to applications such as VoIP that require QoS be enabled, Verizon will closely work with planning and capabilities as they meet the Commonwealth's business and financial requirements.

- Enable QoS on PIP direct access
- Next Generation VoIP strategy for Centrex, key system and PBX replacement
- Multicasting capabilities
- Mobile Worker Strategy

### **Migrating to the Commonwealth's MPLS Network**

Today, the Commonwealth has a statewide WAN environment based on a single provider with Frame Relay aggregation routers leading back to two core ATM switches located in Harrisburg. Commonwealth sites connected to the existing network connect at speeds from 64 Kbps to OC3 using Frame Relay, ATM IMA or ATM. The Commonwealth also has a two-phase project to build a 22-site metropolitan fiber network in Harrisburg known as COPANET. Two sites on COPANET in Harrisburg have direct connectivity to the existing ATM network.

The first step in the migration process to the Commonwealth's PIP network is the connection of the Verizon PIP MPLS service to the two COPANET locations. Four 1Gb Ethernet circuits will be installed at 1 Technology Park and four 1Gb Ethernet circuits will be installed at 400 North Street. Multiple Ethernet connections at each of these two COPANET locations will carry the data traffic from COPANET to the PIP network. COPANET hub sites will have fiber connections to the Verizon metro fiber network.

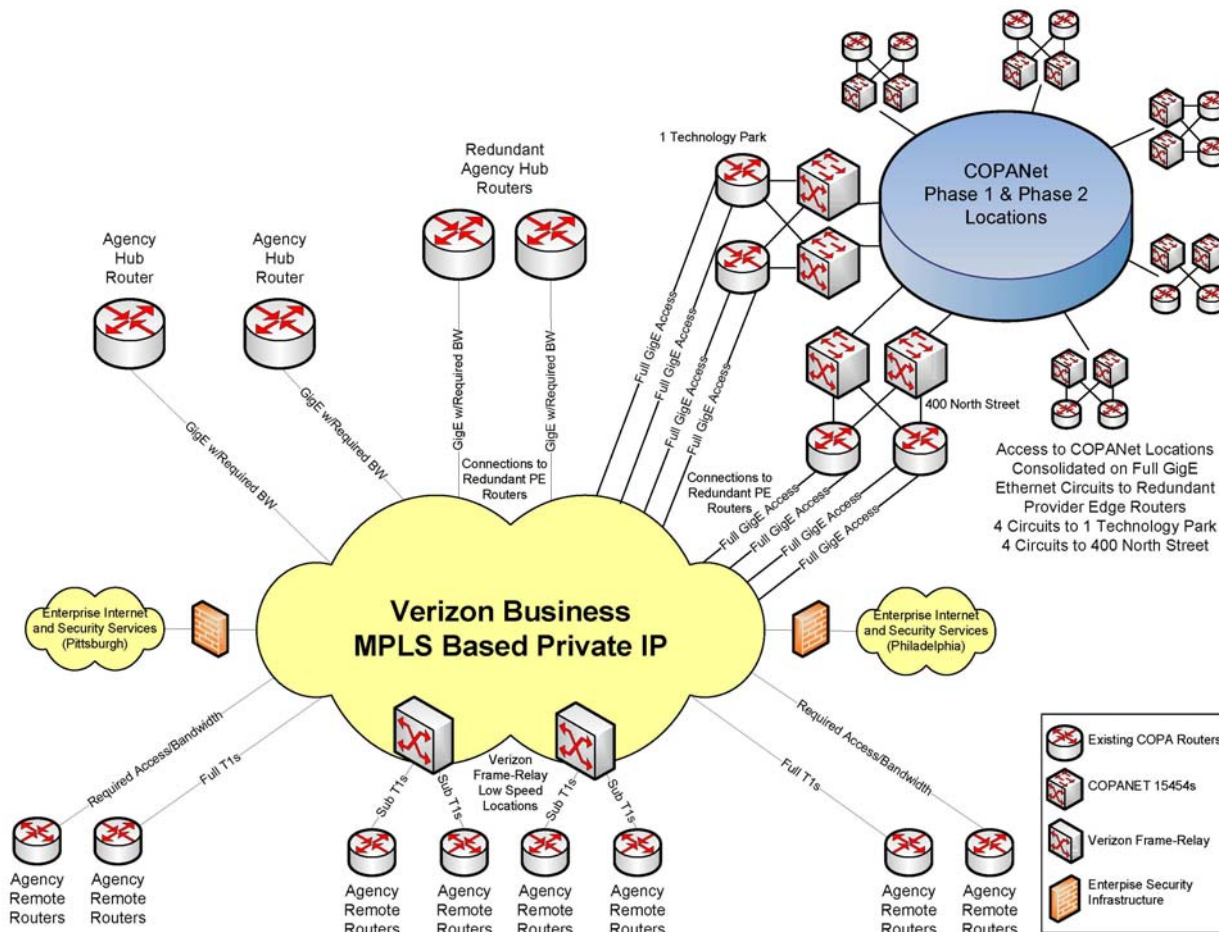
Ultimately, Verizon will move the Commonwealth from the existing environment to the PIP architecture by first migrating key data center and hub sites and then the associated remote sites.

Verizon, with the help of the Commonwealth, will segment sites into tiered site/user types with differentiated service and resiliency levels. When a site is converted to Verizon PIP, the access network will be ordered and then connected to the PIP network. For example, the Commonwealth will order Frame Relay service, and then Verizon will provide a Permanent Virtual Connection (PVC) from the Frame Relay service to the PIP Network.

The purpose of site type classification is to determine the best order for migration of locations within geographies and to complete the migration in a timely manner. As each site is migrated to the Verizon PIP network, the associated Managed Services are migrated to the Verizon NOC environment and the Security Services to the Security Operations Center (SOC).

Due diligence will be needed to ensure all information on the COPANET configuration and interconnection with existing data centers and hub sites is complete. Configuration, interconnection and site priority information will be needed to ensure a smooth transition plan. Approximately 1,100 locations will be connected by Frame Relay access; 1,700 locations will be connected with direct DS1 access to Private IP; and 173 locations will have 1Gb Ethernet connections.

When completed, the new WAN for the Commonwealth will appear as follows:



Commonwealth WAN

In the new configuration, Verizon Frame Relay, Verizon Ethernet and Verizon PIP provide an optimized WAN solution that reuses existing edge devices and protocols while connecting the network to an MPLS any-to-any network.

During the deployment of the Verizon PIP WAN, Verizon’s network design minimizes the number of access circuits required at each location. Verizon will use high speed Ethernet circuits to deliver high speed bandwidth that can be divided into virtual circuits for secure separation of bandwidth to the PIP WAN.

### Virtual Routing Forwarding (VRF) Lite

Currently, Commonwealth multi-agency locations have no mechanism in place to guarantee separate networks within each WAN and LAN. Traffic is kept separated on the LAN via separate routers and circuits to connect to each agency’s network. This solution is costly because additional equipment is needed. Also, more network management and provisioning of each WAN and LAN is required.

Virtual Routing Forwarding (VRF) Lite is a feature available to the Commonwealth using existing Cisco routers and Verizon's PIP service. Verizon's solution provides VRF Lite as an alternative to utilizing additional hardware components and circuits to help ensure privacy on the LAN. With VRF Lite, a managed Commonwealth router has the ability to maintain separate VRF tables to extend the privacy and security of an MPLS network down to the various LANs in each multi-agency office. This enables the Commonwealth to segment the network, thus dedicating bandwidth for each agency based on its unique needs.

With VRF Lite, each agency can access one Cisco router at the multi-agency location. Each LAN segment will have its own VRF table, thereby separating its traffic from other agencies to help ensure privacy. As a result of using VRF Lite, the Commonwealth can recognize a cost savings by eliminating the need to purchase and install multiple routers and dedicated connections.

## Internet Services

For the enterprise Internet connections, Verizon proposes dual 1Gb Ethernet Internet Dedicated Access service located at two geographically diverse facilities in Philadelphia and Pittsburgh. Public Internet connections are not trusted, so each of the facilities is designed with fully mirrored security services. Firewalls are configured in high availability pairs. Intrusion Prevention Systems (IPSs) are installed at both locations. Verizon assumes management responsibility for the security solutions at both public IP locations.

Verizon is able to provide Broadband Internet connectivity via several methods depending on the Commonwealth's requirements. These methods include Internet Cable; Internet DSL – Office; Internet DSL – Solo; and for locations that are not able to obtain Internet connectivity from either cable or DSL, Verizon can provide Broadband Internet connectivity via Verizon Wireless Mobile Broadband .

**Verizon Internet Cable** services provide reliable, high-bandwidth communications using circuits installed by Internet Cable providers. For remote workers and small branch offices, where leased-line costs would be difficult to justify, cable enables rich, multi-media communication, including voice, video, and high-speed access to information and LAN resources.

Internet Cable provides asymmetric bandwidth of 768 Kbps to 1.5 Mbps downstream in select markets nationwide. The service is well suited as a complement to DSL services and can provide additional coverage in large, multi-site applications or in locations where DSL is not available.

The service includes these features:

- Static IP addresses
- Bridged CPE
- Professional, on-site installation
- Service Level Agreements



**Internet DSL** services provide reliable, high-bandwidth communications using standard copper telephone lines. For remote workers (Internet DSL Solo) and small branch offices (Internet DSL Office), where leased-line costs would be difficult to justify, DSL enables rich, multi-media communication, including voice, video, and high-speed access to information and LAN resources.

**Internet DSL - Office** services use Symmetric DSL (SDSL and IDSL) technology to deliver a consistent upload and download speed for office and multi-user applications. The circuits are engineered for consistent performance, which is supported by SLAs.

Internet DSL - Office is a multi-user business solution, designed to provide the Commonwealth with a business-class Internet DSL service using DSL local loop technology as the last mile to deliver access to Verizon's IP backbone.

The service offers a DSL router, multiple static IP addresses, domain name registration and DNS services, multiple bandwidth options, as well as other features to help tailor the service to the Commonwealth's specific needs.

**Mobile Broadband** extends the mobile workforce by providing wireless Internet access solutions. Mobile Broadband provides access to business-critical data and applications whenever users are away from the office. With Mobile Broadband services, employees can stay connected while traveling, at remote locations, in the field, or anywhere on the Verizon Wireless reliable, nationwide data network.

## Network Management Solution

Verizon maintains and operates numerous Network Operation Centers (NOCs) that are aligned with its products and services. Each NOC is equipped with state-of-the-art monitoring and trouble resolution tools and is staffed with resources that are knowledgeable in and experienced with the specific services being proposed. The Verizon solution for the Commonwealth provides an overall Help Desk that serves as the single point of contact, as well as NOCs that service the data, voice, and security solutions.

## Dedicated Helpdesk

Verizon is providing a dedicated Tier 1 Help Desk, located in Pennsylvania, which will serve as the Commonwealth's single point of contact for all issues with Verizon's services. Each of the agents will be trained in the products and services Verizon is providing and will perform basic troubleshooting and triage of Commonwealth issues. In order to facilitate the rapid resolution of problems, Commonwealth-specific scripts will be developed that will enable Verizon's agents to resolve basic issues and accurately identify the proper NOC to engage if additional expertise is required.

For example, if the Commonwealth were to call in with a network connectivity problem, Verizon's Help Desk agents would isolate the problem, determine if it were a managed device or network issue, and engage Verizon's Managed Network Services NOC for resolution. The Help Desk would then monitor the issue to help ensure that the proper resources are engaged, provide status back to the Commonwealth, and escalate to the proper management resource if required. Similar support would be provided for the voice and security services.

The Verizon Help Desk will be equipped with a dedicated Remedy trouble ticketing and tracking system. This system will serve as the point of interface with the Commonwealth's Remedy system and will be e-bonded with Verizon's internal trouble ticketing systems. The Help Desk Remedy will provide a single view into all trouble tickets, thereby providing the Help Desk agents, the Program Management Office, and the Commonwealth a holistic view of the entire solution. This view will enable Verizon to correlate troubles, identify chronic problems, and offer continuous service improvements over time.

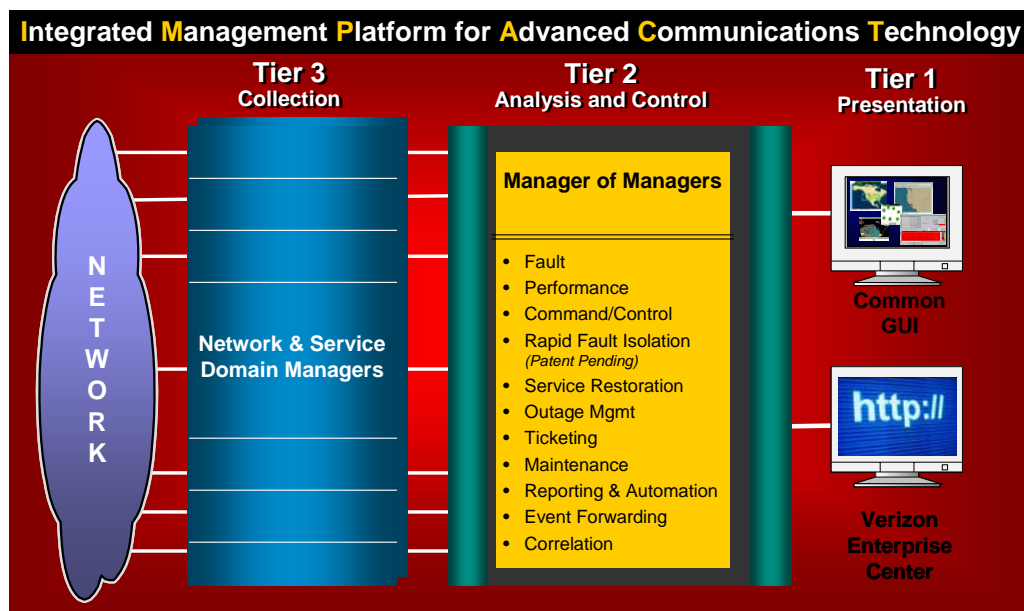
## **Network Management - IMPACT**

At the core of Verizon's Managed Services infrastructure is its state-of-the-art Integrated Management Platform for Advanced Communications Technologies (IMPACT) toolset. IMPACT is a real-time monitoring and control system. The system implements both a modular software and hardware design to accommodate expansion of network operations and monitoring. Information is processed and stored using object technology, XML data modeling and incorporates industry standards, such as ITUT M.3100. The system notifies operations personnel in real time of incidents occurring in Verizon's global network spanning transport, switching, data, IP, DSL and hosted services technologies.

IMPACT provides greater supervision of the network through a highly flexible, distributed design with survivable system implementation, which incorporates the best-of-breed, off-the-shelf technologies integrated within a sophisticated manager of manager's architecture. IMPACT utilizes communications bus architecture for distributed system component communications and an IP-based internal telemetry network for access to network equipment.

Upon installation of Verizon PIP at a Commonwealth agency site, the next step is to begin managed takeover of the LANs not currently being managed by Verizon. For sites currently managed by Verizon, minimal transition will be required. The managed takeover of the LAN will occur concurrently with the WAN migration at other sites, thus creating a single seamless transition period.

For the Commonwealth, the Verizon Managed Network Services Operations (MNSO) team may be providing management services for WAN, LAN, Wireless LAN, and the Security Services. MNSO is where the Verizon Network Management System (NMS) exists. Managed Services is an option for each agency to select.



### IMPACT

## Integrated Testing System (ITS)

The primary business objective of the Integrated Testing System (ITS) is to provide Verizon with an intelligent, integrated circuit and element testing architecture. ITS provides an integrated software solution to be used by customer care and operations centers to install circuits and provide fault isolation for customer-reported incidents. ITS provides sophisticated interfaces to network elements, such as Digital Cross-Connects (DXCs), switches, test heads, DSL equipment, and Verizon back-end systems. ITS also provides automation for flow-through provisioning by automatically performing tests on newly installed circuits.

## Proactive Monitoring

Within the IMPACT architecture, Verizon has incorporated the EMC/SMARTS platform management system.

In support of proactive network management and monitoring, Verizon's MNSO uses technology provided by Systems Management Arts, Inc. (SMARTS): Service Assurance Manager (SAM), and AM (Availability Manager) Knowledgebase. The SMARTS platform consolidates views from multiple management domains into a user-friendly interface for MNSO personnel.

Each customer network is placed in a Verizon network management domain. Verizon supports multiple domains that are driven by customer requirement and implementation.

The CPE in the Commonwealth's network will be configured to send specific SNMP traps to the Open Integration servers, of which there are two per management domain.



Once a problem is identified, the MNSO engineer opens a trouble ticket in Enterprise Trouble Management System (ETMS), and Verizon responds to alerts/ alarms based on pre-established procedures agreed to by the customer and Verizon.

### Detailed Functionality – SMARTS and IMPACT

The SMARTS platform polls every three minutes from geographically diverse Assured Manager servers. Polling between SMARTS fault platforms is randomized within a three-minute poll cycle. On first notification of the event, the fault is forwarded to the SMARTS Service Assurance Manager and held for 215 seconds (smoothing period). This provides for a second poll cycle by the SMARTS Assurance Manager (polling engine) to affirm the root cause of the network event and to allow for network convergence (resiliency) to complete.

If the smoothing timer expires and the event is still active, the event notification is forwarded to the workflow device automations. If the event clears prior to the expiration of the smoothing cycle, no alarm is forwarded to the workflow device automations. Additional root-cause analysis would have to be performed to determine what caused the event.

In the case where an alarm has been received but not cleared at SMARTS, the IMPACT architecture will begin the automation and integration between SMARTS and the workflow device automation tolls.

It is here, workflow automation, where end-to-end network root cause determination of a fault is investigated, resolved, and recorded.

Utilizing the correlation engine within SMARTS, Verizon has the ability to quickly correlate multiple alarms to a single root cause within the Commonwealth's network. Furthermore, by layering the workflow device servers and correlation engines within IMPACT on top of SMARTS as the umbrella architecture, alarms are correlated from customers' networks to other elements within Verizon's network, such as the following:

- SONET backbone
- Digital Cross-Connects (DXCs) used to route the circuit across the network
- Muxes used to aggregate and separate circuits
- Virtual Networks, such as the Frame Relay, ATM, Internet and Private IP networks.

The IMPACT architecture will also correlate Commonwealth network outages against the change management platform to ensure no planned outages are causing loss of communications to the device. Workflow device automations apply to those Tier 3 events not cleared, as previously discussed. The ticket is forwarded to the Ticket Owning Group/Ticket Managing Group (TMG). The TMG is the operations group that is currently responsible for working the ticket. At this point (only 2-3 seconds into the automation process) the five-minute hold down commences (here a workflow event state is set to a Timed (TMD) Wait/Get Data state). The hold down time, in effect, is

a third polling cycle to eliminate false positive alarm conditions and/or to allow for convergence of a failed component (such as reboot). The overall time that elapses between event occurrence and recognition via the SMARTS system and actual customer notification is 15 minutes.

Once the alarm correlation process has completed and no identified planned maintenance or backbone event has been related to the failure, IMPACT moves the fault to the troubleshooting and isolation phase. Verizon's MNSO engineers have many tools at their disposal to assist with fault isolation, including the SMARTS platform from which they can see the routers across either the primary or secondary (redundant) Tier 3 connection. The ITS provides the managed services engineer with the ability to test the circuit and isolate the fault to either the access circuit or the Verizon backbone.

Using other off-the-shelf tools MSO NOC engineers can investigate Verizon's virtual data networks (such as Frame Relay and PIP). Additionally, the MSO NOC engineers have full access to the engineering and provisioning systems within Verizon, thus providing both current and historical information to assist with isolation of the trouble. Even though it is critical that the MSO NOC engineers have direct access to these systems, it is even more critical that Verizon's automation engines be able to eliminate the human intervention required, so that Verizon's engineers only have to interface with these tools on an exception basis.

Based on Verizon patented processes, IMPACT begins interrogation of the router/device to determine if it is a Layer 1, Layer 2, or Layer 3 problem. If a fault is found, the trouble will be referred to the applicable operations center (via E-Bonding) or to Verizon field services. At any time during the process, should an anomaly be found or no fault can be determined, the problem is dispatched by IMPACT automation for review and analysis by a NOC engineer.

The entire SMARTS/IMPACT process averages 11-13 minutes from initial alarm presentation/recognition to completion of the IMPACT process. This includes fault recognition, correlation, interrogation, testing, documentation, and customer notification.

## Managed Security Services

Verizon provides security services to seven Commonwealth agencies today. Since the security infrastructure is in place, these agencies will not be subject to transition activities. Also, Verizon can add new agencies to the current security infrastructure as they are ready.

## Security Operations Centers

Verizon's proposed security solution includes 24x7x365 coverage via two US-located Security Operations Centers (SOCs) being provided via Verizon's security services subcontractor, Integralis. Integralis has five SOCs distributed in the following global locations:

- Hartford, Connecticut, USA
- Aliso Viejo, California, USA

- Singapore
- United Kingdom
- Germany

To meet the domestic requirements of the Commonwealth, the Hartford, CT and Aliso Viejo, CA SOC will provide the following coverage: the Hartford SOC will provide 7 AM to 7 PM coverage. The Aliso Viejo SOC will cover all remaining hours during each 24-hour period.

Commonwealth agencies will have a wide range of requirements for Managed Security Services. Verizon will deliver a portfolio of managed service offerings to defined Service Levels, all of which are managed and maintained using SOC and a proprietary managed services platform—Integralis Security Information Service (ISIS). A choice of different service levels helps to ensure that agencies can maintain ownership over security devices to whatever level is most appropriate, given their individual circumstances.

These SOC are fully redundant and resilient to any single point of failure. Resilience has been achieved through considerable attention to detail. Some of the techniques used to achieve this include the following:

**Redundant networking** - Implementation of a high availability VPN between the SOC, which can route traffic through a variety of routes, including private network links and multiple Internet connections at each SOC. Each SOC implements fault-tolerant networking, including paired redundant firewalls. Multiple Internet access points are available from each part of the infrastructure.

**Redundant hardware** - Careful selection of the hardware used considering its Mean Time Between Failures (MTBF) and the purchase of the highest levels of vendor support. Within the SOC, spare hardware is available that can be rapidly brought into service, if required. All servers have redundant disk systems and power supplies.

**Proactive system administration** - A dedicated team is employed to help ensure that all components of the infrastructure are maintained in a healthy state. This includes both live production and standby systems. Individual servers can be maintained without interruption to service delivery.

ISIS is the proprietary managed services platform. Along with the deep expertise of the security team and its strong processes and best practices, ISIS is a key component of the proposed world-class monitoring and managed security services.

ISIS was designed, developed and built based on years of the team's experience working with managed security systems. ISIS includes a powerful data intelligence engine that effectively and efficiently delivers event correlation from a full suite of managed devices.

This built-in intelligence provides detailed reports and analysis that can be accessed via a Web-based portal. ISIS delivers a new level of reporting that can identify IP addresses that have generated attacks over long periods of time, across broad geographies, devices and customers.

## Security Service Appliance (SSA)

The SSA will be installed at each agency's site and located as close as possible to the devices under management. It is typically on a dedicated network or management network.

Devices being monitored by the SOC are configured to send their log data, such as syslog, Simple Network Management Protocol (SNMP) traps, and OPSEC LEA, to the SSA. The SSA is configured to accept logs from the managed devices, and it will raise an alert if no logs are generated (for example, if a device has failed). The SSA processes the log information and uses it to create alerts and generate data for reporting.

## SSA Agent

Devices being monitored by the SOC are configured to send their logs to the SSA. Servers being managed also have agent software installed for performing additional Verizon services. This agent software typically checks the CPU, disk, swap usage and other areas. The agent sends the information to the local SSA. For devices where an agent can't be installed, the SSA will perform these checks by regularly connecting to the appliance and checking values. Agencies will get these benefits when they deploy the Integralis SSA:

- Processing is done as close to the devices as possible, thereby reducing the amount of data that needs to be sent to the SOCs, which conserves network bandwidth and processing resources.
- The managed device can send the logs in clear text to the SSA because it is located on the same site, and the SSA then forwards them securely to the SOC.
- The SSA can act as a local repository for backup files or software that may be needed to rebuild the managed devices in the event of a failure. Rebuilds and restores are done much more quickly because everything is held on site.
- The SSA acts as a secure point-of-presence on the agency site. That means insecure protocols required for legacy management (for example, Telnet) can be used between an agency site and the SOC because they can be tunneled over secure channels.
- Because the SSA is at the agency site, it is able to "see" devices on the internal network that might not normally be visible from the outside world. This allows the SOC to monitor devices on the internal network without requiring each device to have an externally registered IP address.

## Features of Managed Security Services

Verizon proposes a layered and flexible solution that will meet the Commonwealth's enterprise and agency level security and business needs. This comprehensive solution will include security devices—firewall, IPS and Content filtering/Proxy—as well as managed services.

The managed services offer the Commonwealth 24x7 monitoring and alerting of incidents, depending upon the severity of the incident. The managed offering will include the development of a detailed incident response plan, which will be presented to the Commonwealth for approval prior to implementation.

The managed service will provide the following:

- Comprehensive service logging, monitoring and reporting
- **Policy Management** - Policy Management will allow the Commonwealth to call on the experience of Verizon's operations staff at any time to make configuration changes to agency security policy. Verizon deploys its extensive network security expertise to validate, design and implement changes to the policy. Requests for insecure changes are identified and avoided, thus helping to ensure that a robust security policy is maintained.
- **Platform Management** - Verizon looks after the day-to-day maintenance and management of the security system, performing software updates, configuration changes and configuration backups to keep the system running reliably and securely.
- Routine patching
- Change management
- Customer Management Portal
- Incident Management and Escalation Process
- Remote System Management and Rebuild - Once the hardware replacement has been provided—facilitated by Verizon—a remote system rebuild can commence. The SSA and Out-of-Band remote management kit are used to restore the security device using the most recent configuration within a matter of hours.
- Reporting - A wealth of reporting options is provided via the ISIS Portal. These reports provide information about details of alerts, system availability statistics and graphs, system resource usage and policy modification events. Reporting parameters are flexible and report data can be downloaded in CSV format to allow tailored reporting.

## COPANET

Verizon's solution approach will connect the Harrisburg Metropolitan Area Distribution Network, known as COPANET, to the Verizon MPLS network. Following the current connectivity model, both Phase I and Phase II sites will access the

Private IP network using one of two hub locations on COPANET. COPANET will be connected to the Private IP network using multiple Ethernet connections at each hub location. Verizon's design includes installation of four 1-Gb Ethernet circuits at 1 Technology Park and four 1-Gb Ethernet circuits at 400 North Street. These eight 1Gb Ethernet circuits will consolidate 48 access circuits currently installed in the Phase I and Phase II sites that are connected to COPANET.

Verizon will monitor and manage the COPANET network utilizing the services of its subcontractor, Fujitsu (FNC). The FNC NOCs provide a full range of 24x7x365 proactive network fault and performance monitoring features with connection services offered for transport network elements and public-access equipment. Management Systems support the collection of messages from equipment that provides standards-based TL1 and SNMP data protocols.

COPANET fiber facilities will be maintained and repaired by Verizon and Verizon subcontractors. The FNC NOC will identify a fiber outage and notify Verizon that maintenance or a repair is necessary. Verizon will respond with the necessary resources to repair the fiber outage and restore COPANET to its original capacity and capability. Once the repair is complete, Verizon will notify the FNC NOC of the repair to have the trouble closed. Regular and emergency maintenance activities will be conducted as needed to maintain and restore the fiber facilities that are part of COPANET.

As an alternative approach, Verizon has vast fiber resources and many technological capabilities, and may include the use of customer-owned assets in building cost-effective network solutions. It is expected that the Commonwealth would provide network details on the fiber characterization, deployment aspects (aerial/buried), splicing and fiber length information for Verizon to conduct due diligence on this approach. Verizon will analyze this information and determine how to leverage COPANET assets (fiber and CPE) to determine an economical solution. The expected benefits of this approach could be a management solution that runs more effectively and efficiently by having the network assets integrated into the Verizon network systems. This creates the potential to leverage the economies of scale and the benefits that Verizon attains as a Cisco Global Solutions Partner.

## Managed Voice Services

Verizon's Network Management Centers are broken down into three major areas. The Transmission Performance group is primarily focused on all aspects of managing Verizon's extensive long distance transmission network. The Switch and Systems Support group manages both the physical switch fabric as well as the logical traffic flow across Verizon's domestic and international voice networks. The local services network management center has combined responsibilities for Verizon's local transmission and switch networks.

The objective of all groups in network management, through proactive maintenance and monitoring, is to resolve troubles before the customer recognizes there has been a problem. Achieving this objective results in reduced alarms in the network and quicker resolutions of troubles. Proactive maintenance and monitoring are designed to reduce the number of major outages as well, because the problems are often caught in the developmental stages.



Network Management is staffed twenty-four hours a day, 365 days a year, thereby helping to ensure that problems can be handled at any time they occur. The Network Management Centers are also self-sustaining with uninterruptable power systems as well as dual generator backup. Power is dually fed to the centers from two power substations. The centers are also located on SONET fiber rings and tied to two voice switches for full survivability.

Verizon has always conducted proactive monitoring on an individual case basis, but now have created a specialized department and hired an entire team of people dedicated to proactive monitoring and to meeting service objectives. The Network Event Management Department (NEMD) is responsible for notifying customers impacted by planned maintenance on networks.

Long Distance customers are notified by an automated fax and/or e-mail generated by Scopus approximately one week prior to the maintenance activity. If fax or e-mail contact information is unavailable for a Commonwealth agency, NEMD will contact the account team or the agency by telephone, verify the appropriate contact information for future use, and update Scopus.

Customer trouble histories are maintained, and trending analysis is performed at both the system and circuit levels on an ongoing basis. This enables Verizon to identify trends and isolate problems to a common source for correction.

Each Verizon Local Switching Hub is staffed by maintenance and operations personnel. In addition to installing and maintaining local services, these personnel monitor equipment and alarms and assist in repairing major outages.

Verizon monitors and analyzes the status of the switches, digital cross connect equipment and voice mail equipment; alarms at the switch sites, including fire detection, HVAC, and primary/secondary power; and network elements in the SONET rings. A team of professionals is available 24x7x365 to assist the Commonwealth with local repair.

## Voice Solutions for the Commonwealth

In providing a familiar user experience, Verizon selected its Centrex service as a replacement voice solution. In keeping with the requirements of the Commonwealth, the installation of all Centrex services will be managed through a Disadvantaged Business Partner. Key system and PBX maintenance will also be managed through the Disadvantaged Business Partner.

As Private IP (MPLS) provides a solid foundation for convergence, voice, video and data can all be combined on the network solution provided for the Commonwealth. Agencies seeking a transformation from Centrex, key system or PBX voice services can implement Voice over IP (VoIP) service on the PIP network. VoIP users will find the transformation to VoIP to include Web-based functionality. VoIP is planned for the Department of Health to replace the existing platform.

The Call Center solution integrates ACD functionality with Business Continuity capabilities. In a traditional ACD solution, the agent is tied to a physical handset, computer and location. With the Verizon solution, an agent can function wherever a telephone number, computer and network access exist. This provides considerable flexibility with the Contact Center and agent availability during extreme conditions or business outages. As Verizon's solution is not site-based, agents can log in and become available at alternate locations, thereby providing redundancy.

Several voice solutions are deployed throughout the Commonwealth. Centrex, key systems and PBX systems all provide voice services to end users. Verizon will use a like-for-like replacement strategy to transition the services from the current Offeror to Verizon. Agencies can select a VoIP option during or after transition, if desired.

### **Verizon's Centrex Service**

Centrex is a managed, network-hosted communications service which, as part of the Verizon network, allows the Commonwealth to outsource all the network maintenance and technology upgrades to Verizon while receiving all of the benefits of a world-class network. In addition, Centrex gives the Commonwealth the feature-rich service as required in the RFP, in order to meet its business needs today, and the option to migrate to an integrated voice and data network for greater network flexibility and cost savings as the Commonwealth's needs evolve.

As a network solution, Centrex flexibility allows the Commonwealth to easily capitalize on advanced or emerging technologies while simultaneously safeguarding from obsolescence.

Additional benefits include the following:

- Centrex is a known and reliable Verizon managed service.
- Centrex minimizes financial risk because Verizon has already made the capital investment in its Centrex service (in technology and infrastructure).
- Centrex is built with an open architecture, so it delivers maximum flexibility. That means the Commonwealth can add or change the number of lines in its system, as well as the features needed for its business drivers.

### **Top Centrex Features for End Users**

- Intercom Dialing (also known as Station-to-Station Calling)
- Conference Calling
- Call Pickup
- Call Transfer
- Line Restrictions / Authorization Code
- Executive Busy Override



## Top Centrex Features for System Administrators

Centrex has many advanced capabilities to make life easier for system administrators who manage existing Centrex on a day-to-day basis. These new and improved Centrex features are additional proof of Verizon's continued investment and commitment in Centrex.

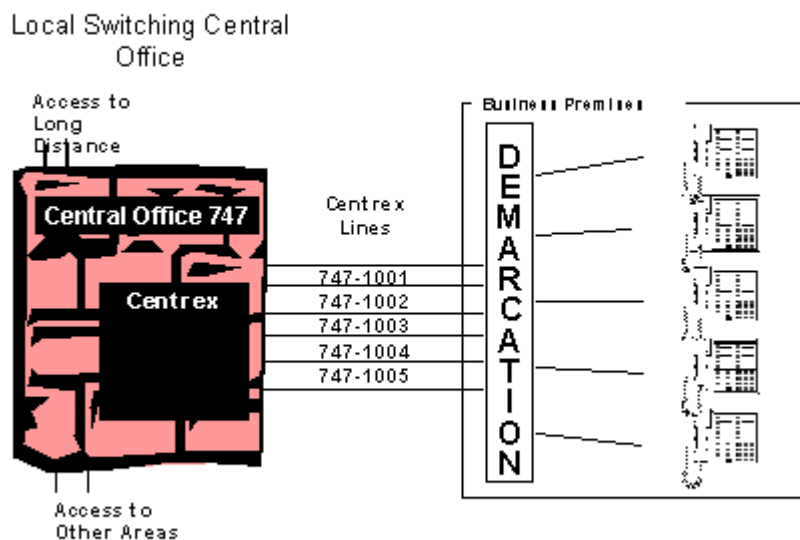
### Features

- Centrex Call Management Services
- Call Hunting
- CMAC (Customer Moves, Adds and Changes)
- Uniform call distribution

### Centrex – How It Works

Centrex is a Verizon-hosted communications system that is central office-based, as opposed to a Private Branch Exchange, which is located on a client's premises. Though both types of communications systems share similar features and functionalities, their business model is quite different. Centrex is a Verizon public network hosted solution and as such it offers a number of advantages for clients seeking to minimize their involvement in day-to-day communications infrastructure work.

### verizon Centrex System Architecture for Basic Services



**Centrex Architecture. Centrex is simply an extension of the local switch to the client's premises via copper or fiber optic facilities.**

This document contains Verizon material that shall not be disclosed, duplicated, or used for any purpose other than to evaluate this proposal.

## Centrex Value-Add Features

For the Commonwealth, Centrex is standards based; it works with any other standards-based application. Also, because Verizon owns the switches for Centrex, they will constantly be updated with the latest technologies. As a platform, Centrex provides an evolutionary step into convergence, thereby allowing the adoption of new service concepts and applications.

As part of Verizon's value-added, optional Centrex services, Verizon offers Centrex View@once®. View@once® is a dynamic, Windows-based, intuitive call management tool for customer call detail analysis. View@once® uses the call detail data generated by Centrex Call Management (CCM) that is provided once a month, on CD-ROM, to generate reports. The CD-ROM provides call detail on all inbound and outbound call patterns designated, regardless of carrier.

View@once provides a GUI and standard Windows® mouse operation to assist in navigation through sixty embedded standard reports, twelve graphs, and eight maps. Query tools can be used to create an infinite variety of custom reports and graphs. Commonwealth users have the ability to export the report information to virtually any of the most popular graphic and database management software packages.

The types of reports that can be reviewed include the following:

- **Call Analysis:** These reports provide analysis of calls by geographic criteria (city, county, state, and billing telephone number), and also by originating numbers or customer-defined groups. The reports are available in detail or summary format. View@once can also organize geographic information by predetermined zones and display it on maps that can be customized and stored in the system.
- **Exception Analysis:** These are reports that analyze calls outside normal calling patterns (calls over specified duration, most costly calls, longest calls, most called numbers, calls over specified cost, and off-peak usage). These reports detail data on a call-by-call basis. The Commonwealth user may specify limiting values at the time the report is executed.
- **Volume Analysis:** These reports help analyze heavy call volume periods.
- **Overview Analysis:** These summary reports identify higher-level trends or totals for groups of calls (cost range, rate period, monthly trending, carrier ID, duration range, call class, and group). Where ranges are specified, the range values are customer-specified.
- **Charge Back Analysis:** Produces the reports needed to support the cost allocation/charge back function. This allows Commonwealth users to identify all calls made to or on behalf of a particular client or project.

In short, View@once gives Commonwealth users the benefit of an easy-to-use report management system, thereby resulting in increased control of outbound/inbound (where available) calling.

## National Unified Messaging Service

National Unified Messaging Service (NUMS) is a network-based Voice Messaging Service offering for customers who are purchasing Verizon Centrex Service.

Depending on the voice processing solution chosen, applications can route callers to extensions or voice mailboxes, offer verbal information, or provide a variety of powerful options.

NUMS highlights are as follow:

- Accepts calls when the line is busy or unanswered
- Access messages 24 hours a day via phone or Internet
- Send messages to other system users
- Send company-wide or departmental messages to specific lists of users
- Be alerted when messages enter email
- Manage messages and other features via the Web using Visual Voicemail
- Menu routing to a phone or mailbox
- Auto Attendant Feature Dial by Name or Dial by Number

Standard NUMS enables access and management of voicemail and voicemail options via the telephone and through the use of Visual Voicemail:

- Listen to, delete, or forward voicemail messages
- Set up to three Find Me/Follow Me numbers
- Set notification options for pager/phones with texting (up to five schedules) and email (via Visual Voicemail).
- Select option to provide shorter voice prompts on the Main Menu.
- Choose which greetings are played to incoming callers (via phone or Visual Voicemail):
  - In the Office and Available Greeting
  - In the Office and Unavailable Greeting
  - Not Accepting Messages Greeting
  - Message Center Default Greeting
- Voicemail PIN change
- Set attendant (Operator) number (via Visual Voicemail)
- Schedule the order of message retrieval, headers, and voicemail message saving (via Visual Voicemail)

- Create distribution lists to send the same voice message to multiple mailboxes within the organization
- Enhanced extension mailbox navigation

Enhanced NUMS enables access to and the management of voicemail and voicemail options via the telephone and through the use of Visual Voicemail.

The following features are available to manage voicemail and voicemail options via NUMS (via phone or Visual Voicemail unless noted otherwise):

- Listen to, delete, or forward voicemail messages
  - Call Options:
    - \* Call Forward (NUMS user can set feature to automatically provide single number where user can be reached.)
    - \* Attendant (Operator) Number
    - \* Reach Me Number (provides single number where voicemail user can be reached)
    - \* Colleague Number (provides number where colleague of voicemail user can be reached)
- Set notification options for pager (up to five schedules) and email (via the Web only)
- Choose which greetings are played to incoming callers:
  - Available and working at the office
  - Available and working away from the office
  - Unavailable
  - Busy
  - Left for the Day
- Voicemail PIN change
- Set attendant (Operator) number (via the Web only)
- Schedule the order of message retrieval, headers, and voicemail message saving (via the web only)
- Create distribution lists to send the same voice message to multiple mailboxes within the organization
- Extension mailbox supported

Information Only permits pre-recorded information message recording only. No message capacity is provided. The maximum greeting length is five minutes.

With Auto Attendant, customers can select from four different auto attendant options:

- Menu Mailbox
- Menu Routing
- Menu Routing Enhanced
- Auto attendant

There are two Listen and Reply options:

- Listen and Reply 1 Minute
- Listen and Reply 3 Minutes

Agencies can use their mailboxes to send and forward messages, including distribution list messages, to other users within the Commonwealth if they are also NUMS users, regardless of their locations within the United States.

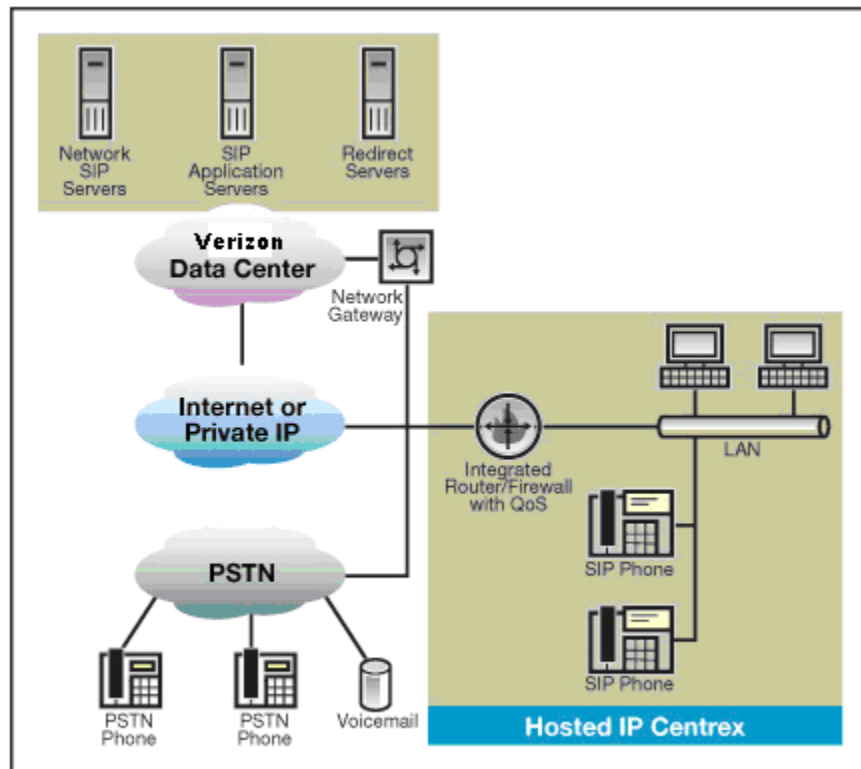
NUMS supports various call processing options including various menu options and a dial by name or auto attendant. Related calls are forwarded to NUMS on a toll-free number where the menu option selected routes the caller based on various options.

Verizon's highly trained personnel will engineer, implement, and install the NUMS service.

An instruction guide and recorded tutorial are available to help assist NUMS customers set up their service. The instruction guide provides detailed information to set up the voicemail. In addition, recorded tutorials are available to help guide through the setup process.

## Hosted IP Centrex – VoIP

Verizon Hosted IP Centrex (HIPC) is a VoIP solution designed for the Department of Health and other Commonwealth agencies that want all of the features of Centrex, a PBX or a key system delivered to an IP telephone or adapter, but without the associated capital, lease, or maintenance costs. All of the PBX functionality—the full suite of features and routing intelligence—resides in the Verizon network. It is ideal for agencies looking to replace Centrex service or outdated PBX or key systems. HIPC includes design, installation, and ongoing maintenance.



*Hosted IP Centrex*

## Benefits of Hosted IP Centrex

Because the PBX functionality resides in the Verizon network, the HIPC solution provides the Commonwealth the following advantages:

- No additional desktop, PBX or key system equipment required
- Delivery of a top-quality, highly reliable, telephony system that is easy to manage and use
- Telecom managers with a desktop interface (Web browser) to manage everyday functions, such as moves, adds, changes, and deletes (MACDs), as well as network applications

## Voice and IP Resident Features

HIPC is offered with more than 50 voice and IP network-based features. Application management is accomplished via an easy-to-use Web-based portal designed with intuitive click-and-point controls.

Highlights of the suite of user and administrative features available with Hosted IP Centrex include the following:

User Features	Administrative Features
Calling Line/Number ID Delivery	Call Blast
Communications Manager (Click-to-Dial, Call Log, Personal Directory)	Call Reporting
Distinctive Alert/Ringing	Configurable Feature Codes
Do Not Disturb	Feature Reporting
Extension Dialing	Hunt Groups/Series Completion
Microsoft® Outlook® Integration	Moves, Adds, Changes
Multi-Path Forwarding	Music on Hold
Private Dial Plans	PBX Dialing Transparency
Ring Splash	Web Administration
Selective Call Acceptance/Rejection	Web Self-Provisioning

### Exceeding Business Expectations

- Versatile architecture allows the Commonwealth to migrate at its own pace and choose from a variety of CPE and access options.
- Robust IP features deliver a complete solution to ensure a seamless migration to VoIP.
- A Web-based provisioning interface provides complete control over all enterprise services and subscriber features.
- Network-based QoS helps ensure satisfactory voice quality.
- Extensive U.S. footprint provides service to remote and branch locations.
- 

### Optional VoIP Services

Verizon IP Communications services offer a broad range of premises and network-based VoIP services that would enable the Commonwealth to choose the services across various locations that best meet the needs and budgets of each location. Verizon's IP Integrated Access and IP Trunking are examples of these services.

IP Integrated Access is designed for small- to medium-size locations that simply need converged voice and data access. This service works with existing Key, PBX, and IPT systems, thereby eliminating the need to heavily invest in extra equipment. With IP Integrated Access, there is no need for equipment changeover or disruption to services.



With Verizon's IP Trunking, the Commonwealth could leverage Verizon's IP backbone to access the Public Switched Telephone Network and voice services, allowing more efficient use of the wide area network resources. Designed for locations equipped with an IP-enabled system, IP Trunking service is delivered via a standards-based SIP trunk directly to an IP enabled system. This streamlined approach eliminates the need for expensive enterprise gateways or cards, and the associated maintenance costs.

Burstable Enterprise Shared Trunks (BEST) is a service enhancement that enables multiple locations to improve the efficiency of VoIP networks by sharing capacity on demand. With BEST, the Commonwealth could use idle trunk capacity in one location to accommodate an increase in traffic from another location. Verizon dynamically monitors the use of concurrent call ports across all locations and allows a location to "burst" over the quantity ordered if ports are idle at other locations. This would enable the Commonwealth to better utilize voice resources by accessing pooled resources across the network.

### **Hosted Automatic Call Distribution (ACD) – Contact Center**

Verizon offers The Commonwealth a network-based, feature-rich ACD as a complete service. Web Center, the Verizon network ACD, provides each agent or supervisor logged into the ACD all functionality described below as part of this service.

Installation, features, functions, and reporting are included in the standard service.

The Commonwealth can allow its constituents to "call in" to an agency's contact center via phone, fax, e-mail, or the agency's Website. Constituents can choose to leave a voice e-mail, wait in queue for the next available customer service agent, or request a call back from an agent. Callers can be flagged according to a preset priority level and treated accordingly.

Through Web Center's tools, agency service agents are better equipped to serve callers. Agents have, at their fingertips, scripts and FAQs, as well as customized caller information. Agents can guide callers through the agency's Website using Web Collaboration tools or send the caller URLs and pertinent information in real-time.

Web Center routes callers to the best skilled agent available at the time of the call.

Also, the Commonwealth supervisors can manage agents more effectively with online reporting and real-time agent coaching. A detailed explanation of the services included with Verizon's network ACD offering follows:

#### **Contact Methods (Multimedia Management)**

- Email Management - Queue and route email to the appropriately skilled agent/agent group, whether on-site or remote, with scripted templates that streamline/semi-automate response handling.
- Web Chat - Queue, route, and distribute caller-initiated chat sessions to the agent or specifically skilled agent group.
- Web Collaboration - Enhance chat sessions by enabling the agent to push URLs back to the caller.

- Web Callback or Scheduled Call Back - Enable callers to request an instant agent callback via the agency Website or via an Interactive Voice Response (IVR) prompt.
- Inbound Voice - Queue and route toll-free calls over Public Switched Telephone Network (PSTN) or VoIP Network to the agency service center or remote agents via Session Initiation Protocol (SIP) or Time Division Multiplexing (TDM).
- Unified Messaging - Standard email client may be used as central location for email, voice mail, and fax.

### **Telephony Management**

- Interactive Voice Response (IVR) - A technology that uses a human voice to present menu options to the caller. The caller can select an option using DTMF or the keypad on the telephone.
- Automatic Contact Distributor (ACD) - Automatically answers calls as they arrive in the system; places calls in a holding queue until agents become available; distributes calls to maintain an even level of activity among agents; and provides timely management information about the system's status.
- Basic Private Branch Exchange (PBX) - Telephone switching equipment conforming to the EIA standards RS-464 and RS-464-1, published in December 1977 and August 1982, and meeting Federal Communications Commission (FCC) registration requirements for interconnection to the public switched network.

### **Customer Relationship Management**

- Customer Relationship Management (CRM) - A technology-enabled strategy to convert data-driven decisions into business actions in response to, and in anticipation of, actual customer behavior.
- CRM Integration - Web Center enables customers to customize how information is handled within the agent's module and servers.

### **Supervisor/Quality Monitoring**

- Supervisor/Quality Monitoring - The ability to randomly monitor calls
- Reporting - Web Center provides three reporting capabilities:
  - Customized Reporting - Allows the user to create a report "on the fly" by selecting from a series of checkboxes, then clicking on the "Create Report" button.
  - Data Extraction Control - Allows users to define specific data fields that extract required information (i.e., by group, lists of groups, date range, interaction type, etc.).
  - Historical Reporting - Provides a data repository through which the user can request historical data for all contact forms to compare with current data for trending.
- Remote Database - Allows the Commonwealth agency to store quality monitoring, reporting details, interaction information on a remote server.

## Additional Features and Benefits

- Browser Based - Web Center is a browser-based service that has minimal system requirements (i.e., Microsoft Windows operating system and Microsoft Internet Explorer 6.0).
- Virtual Agents - Web Center enables agencies to support remote agents and virtual workgroups. The dynamic configuration of agent/supervisor settings are based on each location.
- Administration - Web Center administrative platform provides parameter-based configuration of business rules and routing strategies.
- Architecture - Web Center offers full geographic redundancy with system failure alarm and back-up mechanisms
- Support - In addition to Verizon's account team support, Verizon provides 24x7 support via the Web Center customer service center.
- International Settings - Web Center provides user-defined time zone and date formats.

## Disaster Recovery Services

### Network Design

Verizon uses a wide array of technology, systems, and platforms to support its customers. Each technology in use has its own specific strategy for ensuring availability. Where business models and customer requirements dictate, Verizon incorporates "real-time" restoration and self-healing capabilities into applications and networks that are considered mission critical. Verizon is constantly upgrading the network to improve its performance and reliability, and has a number of systems and procedures in place to respond to network issues.

The Commonwealth can receive fast, reliable telecommunication service over Verizon local city networks. Verizon utilizes SONET (Synchronous Optical Network) technology—an industry standard for high-speed transmission over optical fiber—to construct its networks. Verizon selected SONET ring construction because of its self-healing architecture and ability to transport ultra-high speed digital signals with differing capacities, such as voice, data, and video telecommunications.

Self-healing fiber rings minimize the risk of outage by utilizing a circular configuration. Two paths are available at all times. If an outage is detected anywhere along the ring, traffic is automatically routed in the other direction. Self-healing fiber rings can re-route traffic almost instantly. In most cases, a customer does not even realize that a cut has occurred. This provides the Commonwealth with the highest reliability offered by any telecommunications company today.

## Network Restoration

Verizon's outbound and inbound network services, when disrupted, are restored through a combination of automatic and manually invoked processes. Specific redundancy and backup are inherent to many of the transmission hardware systems (such as fiber optic electronics) employed by Verizon today. However, for service affecting conditions, such as major network outages, it is Verizon's policy to rapidly assess each situation in terms of the specific causal factors, and react accordingly to effect appropriate service restorations. These actions may include the following:

- Automatic restoration of network subsystems
- Rerouting of network facilities
- Manual intervention by Verizon Operations and Engineering personnel as appropriate.

## Crisis Management

Verizon has a mature, well developed crisis management organization to manage disasters anywhere they occur within Verizon's service area. In the US, the National Emergency Coordinating Center (NECC) is the lead organization for disaster response.

In a crisis situation, the purpose of the NECC is to gather, analyze, and disseminate information; develop incident action plans; engage Verizon and vendor supplied resources; and, communicate/coordinate with internal and external partners. The NECC brings together representatives from all operational and support organizations across Verizon for crisis management activities.

In a disaster, the NECC is able to reach across organizations and silos in the company quickly in order to develop and initiate plans, deploy resources, engage vendors, coordinate response, and communicate inside and outside the company. Participants are trained in the Incident Management System and NECC crisis management processes. Each emergency operations center is tested in large regional exercises at least twice annually.

## Disaster Recovery – PIP

Greatly enhanced disaster recovery is probably the single most important benefit of Verizon's Private IP network. PIP's any-to-any structure allows it to easily re-route all data from or destined to a disaster-struck site. PIP can re-route the data to or from a site that is running normally and intact. Unlike ATM and Frame-Relay networks, in which backup PVCs are required at all locations during an event, PIP remote sites can quickly and easily re-route to backup locations when needed. This allows applications to be available at any networked location during an event. As these application requirements change, Verizon will work with the Commonwealth to see that the required multiple redundant layers are incorporated into the network.

## Disaster Recovery – Internet

Verizon's solution for the Commonwealth's Internet involves four separate connections in two diverse locations with each connection able to handle the entire bandwidth required by the Commonwealth. The disaster recovery is handled by this redundancy and geographical diversity. The access circuit for the Internet will be Private IP (PIP) and Verizon's SLA for PIP would apply.

## Disaster Recovery – Centrex

Centrex has been reliably serving clients for over 40 years. Centrex is monitored 24/7 from the Central Office by highly experienced engineers. In the event of hardware or network failures, Centrex can be cut over to backup systems or be replaced expediently by backup equipment that is available on site.

## Disaster Recovery - VoIP

The Verizon VoIP suite of products takes full advantage of the resiliency built into the Private IP network to deliver voice services with the highest availability. VoIP has the ability to operate with a variety of IP access methods in the event of a disaster, such as T1s, satellite, or wireless. In addition, the actual core VoIP nodes themselves, located in geographically diverse, state-of-the-art data centers, help ensure that regional disasters do not affect service. Local gateways, distributed throughout the network, further enhance diversity and eliminate single points of failure.

## Disaster Recovery – Web Center (ACD)

Web Center resides in the network and can be effectively and quickly configured or restored across alternate physical locations. This provides for flexible cost effective business continuity, emergency preparedness, and pandemic planning options. The high cost and inherent delay of building and equipment configuration is much less of a factor than with traditional ACDs.

## Disaster Recovery – Managed Services

Verizon has established disaster recovery plans for each NOC worldwide. In the event that a catastrophic situation occurs, Verizon will activate the Disaster Recovery Evacuation plan, which conducts the following:

- Notification to management of catastrophic disaster requiring relocation of the primary facility to the designated back up facility.
- Management approves the disaster recovery evacuation decision.
- Secondary NOC is notified of evacuation plans for NOC in jeopardy.
- Employees are evacuated to the designated disaster recovery center.
  - 15 employees per shift will be dispatched; all others will be authorized to work from home or other Verizon locations.

Upon re-establishment of operations, NOC personnel from the secondary center will disengage and operations will be turned back over to the primary network operations center personnel.

### **Disaster Recovery – Security**

Security SOCs are fully redundant and resilient to any single point of failure. Resilience has been achieved through considerable attention to detail. Some of the techniques used to achieve this include the following:

- Redundant Networking
- Redundant Hardware
- Proactive System Administration

### **System Management Services**

Verizon is proposing to utilize its breadth of proven service management platforms to deliver like-for-like capabilities of the existing CTMS platform. The components being proposed leverage industry standards and continue to be designed and built to support Verizon's customers' large scale, mission-critical business applications.

Verizon's solution consists of three fundamental domains:

- A Service Desk
- A Custom Web-based portal
- An integrated service management platform

The Service Desk will be the Commonwealth's window into Verizon's proposed suite of network services. The Service Desk will provide a "one-stop shop" for delivery and management of Verizon's network-based services. A keystone to effectiveness of this Service Desk will be the custom, Web-based portal. The portal enables the use of the following:

- A custom product catalog
- Service ordering (including order status/tracking)
- Service inventory
- Billing
- Trouble ticketing
- Reporting across Verizon's product lines
- The underpinnings of these portal functions are provided by the various components of Verizon's internal service management platform. Those components include, but are not limited to, the following Verizon tools:
  - A Configuration Management Database (CMDB)

- A custom Product Catalog
- Verizon's Incident Management processes
- Verizon's Change Management processes
- Verizon's resource unit-based billing engine

Given that Verizon will not have access to the technical details of the CTMS platform until February 2011, the Commonwealth understands appropriate due diligence shall be required in order to ensure the success of this development and subsequent transition. Given the scope and proprietary nature of CTMS, it is estimated this due diligence will take several months. Verizon will work with the Commonwealth to determine an appropriate plan of action once CTMS is available for vendor review.

The focus of this due diligence will be to gain a complete understanding of CTMS' system interfaces, process flows, and data flows. However, this may be reduced, depending upon the amount of CTMS-specific information captured during Verizon's management of the supplier between the time of contract signature and February 2011. Once due diligence is complete, Verizon will develop a plan to deliver the like-for-like CTMS functionality by leveraging its proven service management platforms.

## Overall Approach and Value

### Verizon Approach

#### Overview of Proposed Implementation/Transition Plan

Verizon will deliver its service management framework based on a proven approach to governance by leveraging a Program Management Office (PMO) dedicated to providing the Commonwealth the following:

- A single source of accountability
- An integrated approach to managing professional services activity
- Streamlined administration of third-party vendor management
- Consolidated reporting

As a single-source facilities-based provider, Verizon can provide the accountability the Commonwealth demands. This helps to ensure that the Commonwealth will have only one place to turn for service turn-ups, troubleshooting, Moves/Adds/Changes (MACs), and other day-to-day services. This completely eliminates the finger pointing that occurs in multi-provider scenarios. Verizon's proposed solution for the Commonwealth's telecommunications environment is further supported by best practices from industry-recognized bodies of knowledge, such as ITIL, ISC2, PMI, DRI, and SDLC.



Verizon's approach to transition begins with detailed planning. This team will be led by a seasoned transition services staff, which will interface with the Commonwealth's key program personnel to identify key milestones and service turn-up dates. During the transition of the legacy environment to Verizon, Verizon will initiate a transformation planning phase to optimize networking solutions and will create a technology plan and roadmap for transformation. The plan will include the following:

- Network designs
- Technology architecture
- Re-designed processes
- A technology refresh strategy
- An operational delivery model
- A governance process

A major deliverable during transformation is the agreed-upon implementation schedule for the new managed telecommunications services. Once Verizon and the Commonwealth achieve joint agreement, Verizon will employ a specialized team to coordinate the following:

- Implementation activities to include site surveys
- Communicating planning activities
- Establishing acceptance and back-out criteria
- Ordering appropriate site equipment and transport
- Tracking change management
- Coordinating activities with site contacts and the implementation team

Verizon is managing 37 of the Commonwealth's agencies in the Verizon management NOC, which will allow a smoother transition of the remaining services. Verizon is prepared to protect the Commonwealth's network information and has developed detailed recovery scenarios to be ready in case of disasters and national emergencies.

Verizon will provide steady-state support of remaining managed telecommunications services as these services are transitioned. Verizon's steady-state support model delivers consistent and efficient management of services through centralized oversight and control relying heavily on a contingent of Pennsylvania-based resources that include, among others, a Verizon management NOC already supporting the Commonwealth and a Commonwealth-dedicated Help Desk. Verizon's skilled and experienced service delivery teams support all aspect of management including the following:

- Incidents
- Fault isolation

- Incident/trouble resolution
- Configuration management
- Change management
- Overall governance

## Verizon Value

### Meeting the Commonwealth's Goals and Objectives

Verizon has a proven record of bringing the benefits of advanced communications to organizations throughout the world and looks forward to aligning these world-class services to further the goals and objectives of the Commonwealth. The use of in-place assets avoids the expense, the delay and risk of the Commonwealth's growing its own infrastructure. The use of Verizon's infrastructure by multiple branches of government and the private sector constitutes a clear example of shared use.

The Commonwealth as a whole—both state and local governments and the private sector—will benefit from Verizon's continued investment in its local and global data and voice networks. Toward this end, Verizon has mapped out an aggressive growth plan for 2009, especially in fiber optic and wireless infrastructures.

### Why Verizon

Verizon is in a superior position to provide technologically sound and cost-competitive solutions given its market penetration of the shared service marketplace. Verizon has a proven, successful track record in this market space. Verizon serves 98 percent of Fortune 500 companies and numerous federal, state and local government organizations.

Verizon is experienced with ***meeting unique requirements of governments*** for secure, fault-tolerant networks. Verizon customers with demanding, dynamic, and mission-critical network requirements include the following: The US Navy, Social Security Administration, United States Postal Service, and the State of West Virginia. Within the Commonwealth of Pennsylvania, Verizon provides telecommunications services to a variety of state agencies, local governments, K-12's and state-related universities.

Verizon is a respected authority and provider of industry-leading security products. Verizon has a long history in the cyber security marketplace, with an association with ICSA Labs, independent division of Verizon Business, headquartered in Mechanicsburg, Pennsylvania. In recent years, Verizon has significantly enhanced its leadership position in cyber security by acquiring several security companies, such as NetSec, UUNET, Digex, and Cybertrust.

The **financial stability** of a key partner is a critical factor for decision makers in today's uncertain, deteriorating economic climate. Verizon brings the strength of a Fortune 20 company with revenues exceeding \$90 Billion, assets of \$186 billion and a stock price that has weathered the economic tsunami in the fourth quarter of 2008 and the first two months of 2009. Verizon is here today and will be providing service to millions of Pennsylvanians very far into the future.

Verizon endorses the Commonwealth's decision to pursue a managed telecommunications services solution. Verizon concurs with this strategic direction and supports the Commonwealth's goal of implementing consistent managed services across the agencies. **Verizon** believes its approach is far and above the best in providing the Commonwealth the following **benefits**:

- **Single Point of Accountability** – Verizon will be the primary interface for all services provided in this proposal. Commonwealth management will be relieved of the necessity for third-party vendor management and coordination, including non-Verizon ILECs.
- **End-to-End Ownership** – Verizon, as an experienced local exchange provider in Pennsylvania, owns the transport critical to meeting the Commonwealth's needs.
- **Financial Strength** – Verizon is financially strong and will continue to make significant investments in its services that will ultimately benefit the Commonwealth.
- **Experience** – Verizon's extensive experience and institutional knowledge of Commonwealth operations supports the integration and management of complex communication solutions. This allows the Commonwealth to control its IT investments, minimize technology risk, and optimize technology solutions as needed.
- **Network-Enabled Solutions** – Verizon has the ability to provide the Commonwealth with next-generation voice, data and business application solutions to transform the way agencies deliver services to Pennsylvania constituents.
- **Ease of Transition** – Verizon has the experience and resources to transition the Commonwealth's services expeditiously and cost effectively.
- **Verizon Code of Conduct** – Integrity, respect, performance excellence, and personal accountability—these are the core values of Verizon employees.

Verizon, as stated previously, believes it is in a unique position to meet the specific requirements of this RFP and to provide an evolutionary path to a next-generation network. A fundamental paradox of information technology in today's world is that technology changes and economic upheavals can occur at any time. Any long-term contract for managed services must provide an **agility and flexibility of response** to accommodate unplanned changing circumstances. Verizon believes that it has proven itself to be a strong, stable partner of the Commonwealth in the past and is best able to address any and all future contingencies.

More specifically, some theoretical examples follow:

- **Evolving Technology** – As technology evolves, market pressures will require Verizon to create new and enhanced service offerings. The Commonwealth could then access these new services without the delay and cost of self-development.
- **Service Assemblies** – The scope of in-place Verizon services and skill sets could be combined and packaged in an unlimited number of ways to meet specific business solutions. These could be created *just in time* as the business need arises. For example, various security and mobile networking solutions could be combined to provide mobile communication services to first responders.
- **Cloud Computing** – There appears to be an emerging movement away from data center-centric to dispersed cloud computing whereby specific application services can be executed over the network. Indeed, this is the promise of IP-enabled networking. The real-world operation of such a concept, however, will require response time and security monitoring for SLA compliance. Although the specifics of the performance and security needs for cloud computing are not completely clear today, it is obvious that Verizon, more than most other vendors, possesses the depth and breadth of services to assemble a solution.
- **Virtualization** – As is the case with business and governments today, the Commonwealth recognizes the multiple challenges it faces with rising energy costs and pressure to improve performance and efficiency. At the same time the Commonwealth is also dealing with increased computing demand as applications become more complex and require additional computing power. Virtualization can help streamline operations and improve efficiencies. Verizon offers a broad array of virtualization consulting and management services to assist the Commonwealth in implementing a virtual environment for all or part of its network.
- **Pandemics Planning and Business Continuity** – Verizon has a mature, well developed crisis management organization to respond to disasters anywhere they occur within Verizon's service area. Verizon conducts scenario-based exercises internally at least annually, often relying on simulations of real-world events as the foundation for development of the exercise content (e.g., bombings and pandemic influenza). Verizon tests both technology recovery as well as crisis leadership—thereby helping to ensure good decision making under pressure, effective resource management, and communication with internal teams and external organizations. Redundancy and resiliency are core elements of the Verizon network, and Verizon develops its products and services to withstand disaster scenarios.

### Verizon's Commitment to Pennsylvania

Verizon is not only firmly committed, but has roots within the Commonwealth of Pennsylvania. The proposed voice and data services for the Commonwealth will create a new demand for customer service support within Pennsylvania, thereby creating new jobs and opportunity for Pennsylvania citizens. As part of Verizon's commitment to this opportunity, Verizon will leverage the knowledge and expertise of several Pennsylvania-based Disadvantaged Business Partners throughout the life of this contract.

Verizon's commitment to Pennsylvania extends beyond this opportunity. Verizon currently employs over 16,000 dedicated people in the Commonwealth and pays an estimated \$10 million in taxes annually. Verizon serves the citizens of the Commonwealth with almost 5 million telephone lines and 1.7 million fiber optic miles throughout Pennsylvania. Verizon has contributed \$34.3 million to Pennsylvania's state e-Fund. The award-winning FiOS service is available in over 300 communities and continues along a path of aggressive expansion.

Verizon believes in the spirit of giving back to the communities where its customers and employees live and work, as demonstrated by several partnerships and programs local to Pennsylvania. This deep sense of community involvement is rooted in the foundation of one of the company's greatest strengths—its employees. Verizon employees and retirees have volunteered over 40,000 hours and raised over \$1.1 million for non-profits in the Commonwealth. Verizon's commitment to volunteerism and fund raising efforts in Pennsylvania includes the following examples:

- Allegheny County Library Association in Pittsburgh "Summer Reading Program"
- National Constitution Center in Philadelphia "Living News Program"
- PA Department of Education "Verizon Thinkfinity Rollout Partnership"
- PA Library Association "PA One Book; Every Young Child"
- Police Athletic League of Philadelphia "Boys to MENtoring Program"

# Commonwealth Telecommunications Management System

## Service Delivery Model

*The Offeror should outline its overall service delivery model as well as a service specific delivery model given the scope of services that are within this RFP. What issues and concerns does the Offeror have in its ability to deliver the required set of services? What approach would the Offeror suggest that would improve (reduce) the overall cost of service delivery? Identify, based on the Offeror's experience, how these savings will be achieved and the magnitude (percentage) of these savings.*

*The Commonwealth leverages the skills and expertise of several internal and external service providers in the delivery of information technology services to its employees and constituents. The Offeror will describe its approach and experience in working in a multi-provider environment with a focus on the integration of tools and process. Include detail on the structure and associated roles and responsibilities of the Offeror's account management team.*

## Verizon Response

### Service Delivery Model

Verizon has proposed a Service Delivery Model to lead, manage, and support all products, services, partners and teams in delivering its solution to the Commonwealth. A cohesive partnership between Verizon's Account Team, Service Management Team and PMO, all dedicated to the Commonwealth, will drive the success of Verizon's solution and build continued trust and relationship with the Commonwealth. The foundation of this commitment will be supported through local accountability and personnel wherever the Commonwealth needs Verizon to be, with primary responsibilities residing in Pennsylvania.

The PMO will lead the overall relationship on behalf of Verizon with the Commonwealth, providing the Commonwealth will a single point of contact for the Solution, thus enabling expeditious response and action across the Service Delivery Model.

### The Program Management Office (PMO) Model

The Verizon PMO will be fully staffed with dedicated personnel that will be hired and/or appointed following contract award. It is Verizon's intention that personnel hired to fulfill the commitments of the PMO will be appropriately skilled, experienced and educated in accordance with the key position requirements outlined in the RFP.

## The Governance Model

In order to establish a forum for policymaking, technology strategy planning, and joint decision making, Verizon proposes to work jointly with the Commonwealth on the establishment of a Governance Model. This model calls for periodic leadership reviews, technology council forums, and planning sessions.

Communication within and among each party requires diligence. Each customer and each contract offer unique challenges to ensure that the services delivered meet or exceed expectations and that business objectives are achieved.

**Management of Relationship: Governance Model.** The ongoing business relationship between Verizon and the Commonwealth is the responsibility of the Parties' respective Managing Coordinators and teams composed of representatives from Verizon and the Commonwealth. The proposed Governance Model may be modified with input from both parties; in the end it will become the working framework that ensures the services are delivered as expected, and the relationship functions with high levels of satisfaction. There are four (4) components of the Governance Model:

- 1. Managing Coordinators.** Verizon and the Commonwealth will each appoint an executive to serve as the Party's Managing Coordinator under the contract. Each Party's Managing Coordinator shall be the Party's sole authority to receive notices, communicate desired changes in the operating relationships between the Parties, arrange meetings, maintain pertinent records, and coordinate disclosure of data or information to be made pursuant to the Agreement. The Managing Coordinators also act as facilitators to resolve disputes in accordance with the Agreement. On behalf of Verizon, typically the assigned Managing Coordinator is the dedicated Senior Program Manager.
- 2. Steering Team.** The Steering Team consists of executives from both Verizon and the Commonwealth. The Steering Team ensures from a policy perspective that the relationship between Verizon and the Commonwealth is progressing as desired and furthermore that the relationship is aligned with the expectations of the Parties' Executive Management. The Steering Team is responsible for issues including, but not limited to, those regarding executive alignment, dispute resolution, the scope of the Agreement and strategy and direction of activities under the Agreement, in each case in conjunction with the Parties' Managing Coordinators. The Steering Team also resolves disputes.
- 3. Operations & Planning Team.** The Operations & Planning Team (OPT) has several objectives. From a planning perspective, the OPT is chartered with ensuring that the Service Level Obligations, performance measures and incentives/credits meet the current requirements, which may change over time. Should changes in Service Level Obligations, metrics and incentives or credits be required, this team has the authority to recommend changes. Should the OPT not be able to reach resolution, it will make recommendations to the Steering Team.



From an operations perspective, the OPT is chartered with monitoring performance and assuring conformance with Service Level Obligations and is obligated to resolve all operational incidents and disputes. Should these incidents and disputes not be resolved with the agreed-upon incident-specific time period, they will be escalated to the Steering Team.

- 4. Technical Review Team.** The Technical Review Team has the responsibility for ensuring that the Services delivered or planned fit within the communications architecture and standards environment of the Commonwealth and are consistent with emerging technology. Financial assessment of new services and changes in architecture and standards are within the purview of this team. The Technical Review Team will have representatives from the Commonwealth and Verizon who will be subject matter experts in their respective areas. The Technical Review Team meets as needed, but at least once per calendar quarter.

Responsible Team	Members	Meeting Frequency	Description/Purpose
Steering Team	Executive management	As appropriate	Executive alignment, issue resolution, scope interpretation, strategy and direction.
Operations & Planning Team	Designated OPT Management leaders from the Commonwealth and Verizon	As needed (at least monthly) for status and performance reviews; quarterly reviews for SLAs; Annual reviews for benchmarking	Examine SLAs, benchmarks, Customer satisfaction surveys, recommend changes to ensure quality. Examine and evaluate proposals for sharing opportunities. Review base headcount, base pricing and incremental pricing models. Resolve all operational, planning and personnel issues of concern to the Commonwealth and Verizon. Should these issues not be capable of being resolved, they will be escalated to the Steering Team. Plan for changes in the services and present recommendations to the Steering Team.
Technical Review Team	Designated technical leads from the Commonwealth and Verizon	As needed (at least quarterly).	Establish architecture, high-level design, and standards. Ensure that projects are consistent with architecture. Conduct high-level overview of strategic capacity planning. Conduct annual review of available technology; assess current technical direction, conducts competitive review.

## Ability to Deliver

Verizon and its predecessors have extensive experience in the Governance Model. Verizon believes this model offers the best means to provide a productive method to achieve a workable and successful business relationship within the demanding confines of a complex technological delivery solution. The structure has evolved over time based on Verizon's work with many global accounts. Positive feedback from customers and knowledgeable users within the business community has reinforced Verizon's belief that this model is the best in the industry as it encompasses and demands engagement of both Verizon and its clients in a collaborative relationship.

Through the leadership of Verizon's PMO, Governance Model and customized Service Delivery Model, Verizon is confident in its ability to deliver the Commonwealth's requirements and meet contractual commitments and service level agreements.

## Cost of Service Delivery

Verizon offers a solution that allows the Commonwealth to evolve to technology that will result in measurable cost savings. Verizon's next-generation design and proposed services will mean approximately five (5) percent or more in annual savings compared to what the Commonwealth pays today for its current services. In addition, Verizon's proposal includes advanced services that provide return on investment beyond the telecommunications bill.

State and local government customers throughout the Verizon LEC region are realizing the financial benefits a multi-pronged provider can deliver: traditional LEC services, the advanced technologies brought via the acquisition of MCI, and the unique mobility solutions delivered by Verizon Wireless. This combination brings access closer to the end user via a dramatically increased number of network Points of Presence for all services. The underlying technology supporting convergence to next-generation services is Verizon's ubiquitous MPLS network.

This broad portfolio of network assets combines to save the Commonwealth in multiple areas, including the following:

- Elimination of multiple facilities into a location, thereby reducing overall circuit cost
- Enhanced voice technology capabilities that will allow for a dedicated rate for all local calls originating from a Centrex line, thus eliminating the additional costs associated with switched calls
- Convergence to a single network for voice and data, thus lowering the overall network cost
- End user productivity gains with advanced IP features and functionality
- Reduced cost of MACs with use of a custom Commonwealth portal for all telecommunication services

- Redundant, reliable data and voice network design with solution-wide SLAs that will help to ensure limited service interruptions and the associated loss of agency revenue or work force productivity
- A single Help Desk supporting all services within the six existing contracts

Consolidating the six major telecommunications contracts into a single Verizon agreement will lower administrative costs associated with management of multiple relationships. The Verizon PMO will institute a streamlined approach to managing MACs, SLAs, and timely and accurate submission of invoices. The PMO will also administer the overall contract and financial governance necessary to maintain consistent and predictable billing throughout the life of the relationship.

## Approach and Experience

To respond to the Commonwealth's requirements, Verizon will establish a dedicated PMO to assume responsibility for the operation and management of the Commonwealth's Managed Telecommunications Services Infrastructure.

Verizon Program Managers are seasoned telecommunications professionals possessing skills in business management, financial management, project management, service management, and telecommunications engineering, on which the Commonwealth can rely to manage its telecommunications services.

The Program Management team does not supplant the role of the Verizon Account team, but serves to augment that relationship.

## Account Team

The members of the dedicated Harrisburg Account Team will continue to deal directly with the Commonwealth's management on account relationship issues. The primary roles of the account team are as follows:

- Strengthen the strategic relationship between Verizon and the Commonwealth, so that Verizon can better understand, anticipate and meet the Commonwealth's needs and requirements.
- Maintain overall responsibility for sales, support, and operations.
- Ensure that agreements are finalized and signed by all parties.
- Periodically brief the Commonwealth on new services and technologies that may be of interest and use.
- Participate in evaluation of network topology, diversity, and connectivity issues; and
- Provide the Commonwealth with pricing information on request.

## Program Management

The Commonwealth will be assigned a seasoned Contractor Project Manager. This individual is ultimately responsible for delivering services that meet the Commonwealth's requirements, are delivered on time, and are within budget. The Contractor Project Manager will lead a support team, at least for the duration of the transition/implementation phase, to give greater focus to the daily details of the implementation. This support team will consist of project managers and project coordinators, whose tactical roles are described below.

In addition to the Contractor Project Manager, a few support team members will be retained for the entire life of the contract, specifically in project and vendor management. The Contractor Project Manager will serve as the single liaison to the Commonwealth for program support and functionally manages this team.

The Contractor Project Manager will perform the following functions:

- Organize and matrix-manage all resources within Verizon required to deliver service
- Evaluate, prioritize, and communicate the Commonwealth's requirements
- Interface with the Commonwealth's management team to provide status of implementation projects, including goals, timetables and milestones
- Act as the primary liaison between the Verizon project team and the Commonwealth
- Drive service issues to resolution and escalate as necessary
- Monitor ongoing service management to ensure compliance with SLAs
- Monitor resource loading and distribution to ensure the quality delivery of services
- Understand the Commonwealth's current and future business goals and work with the Account Team to offer Verizon solutions to help achieve those goals.
- Ensure that all contracted program deliverables are completed.

The Contractor Project Manager is accountable to the Commonwealth for service delivery as defined in the Agreement. The Contractor Project Manager is also accountable to Verizon management for financial aspects of this relationship along with the Account Team. This dual role empowers the Contractor Project Manager to obtain the resources necessary to maintain high levels of customer satisfaction and ensure the relationship has the appropriate management visibility within Verizon.

## The Service Management Team

Verizon's primary goal is to provide premier customer service. Verizon is addressing this through a team of direct customer support individuals, which include an extensive local account team. Verizon's ability to deliver world-class service and support is fully dependent on the continued knowledge and understanding of the

Commonwealth's business drivers. It is this knowledge that will serve as a benchmark in directing the account team's areas of concentration. All teams, whether direct or internal, work closely together as one overall team to deliver consistent communication and support.

## Functional Descriptions of Service Personnel for the Commonwealth

The following descriptions are for the specific roles for which resources will be dedicated to the Commonwealth:

**Service Manager:** The Service Manager (SM) manages the relationship between the Commonwealth and Verizon, through understanding the customer's culture, behaviors and business drivers. The SM is responsible for identifying and understanding the Commonwealth's service needs, working with the Commonwealth to establish appropriate expectations and utilizing all appropriate Verizon resources and subject matter experts to meet these needs. The SM will be highly visible and accessible, focusing on the goal of providing World Class Customer Service. The SM will participate in Quarterly Service Reviews supporting all areas of interface between the Commonwealth and Verizon. The SM will be accessible on a 24 by 7 basis, and provide the Commonwealth with back up contact information when applicable.

**Implementation Manager:** The Implementation Manager (IM) is responsible for providing project and resource management in support of installing and activating core and strategic products via standard and non standard processes. The IM is responsible for coordinating implementation activities between the Commonwealth, Verizon's branch/account team personnel (pre/post-technical support), internal groups to Verizon (e.g., order entry, provisioning, CPE, Operations) and third party client/vendor resources (e.g., voice and data equipment vendors, local access providers, etc.) as needed. The IM will consistently leverage his or her expertise in resource/project management, offer suggestions to improve service delivery performance and generally utilize product knowledge to ensure the Commonwealth's provisioning and communication needs are being met. Additionally, the IM will provide the customer with back up contact information when applicable.

**Technical Service Manager:** The Technical Service Manager (TSM) acts as the customer advocate and communicates consistently and appropriately in relation to the performance of the products and services provided by Verizon, including ensuring SLA adherence. The TSM will serve as a consultant to the Commonwealth to continually drive optimization, stability and durability of the Commonwealth's network, while working with all appropriate Verizon internal organizations to provide the Commonwealth with World Class Customer Service. The TSM will partner with the account team, and specifically the Service Manager, to develop and manage network and service plans for the Commonwealth, participating and playing an integral role in Quarterly Service Reviews. The TSM is accessible to the Commonwealth on a 24 by 7 basis, and provides the Commonwealth with back up contact information when applicable.

## Contract Management and Compliance

The Contractor Project Manager is responsible for the compliance of contractual commitments, and, before an implementation is considered complete, the Contractor Project Manager will lead a comprehensive review of all contractual requirements and secure agreement with the Commonwealth. This review also ensures the billing process is working to the satisfaction of both Verizon and the Commonwealth. The Service Level Management Analyst documents any variances and develops plans of action to bring the initial program into compliance.

During the life of the contract, the Contractor Project Manager monitors Verizon service delivery against all contract requirements to ensure that all deliverables in the contract are being met.

## Third Party Vendor (TPV) Management

- The Verizon Third Party Vendor Manager assumes responsibility and accountability for arrangements with third party suppliers and vendors on the Commonwealth's behalf by providing a single point of contact.
- The Third Party Vendor Manager will oversee the implementation of complex solutions provided by Verizon and third party vendors.
- The Third Party Vendor Manager will monitor financial aspects of a TPV relationship to ensure that all auditing principles are followed, and to correct any variances.

## Quality Management

The Contractor Project Manager is ultimately responsible for the Commonwealth's overall satisfaction with the services provided. This task is accomplished by making use of several practices.

- Continuous Direct Contact - For awareness to the Commonwealth's changing needs.
- Recurring Program Reviews - Covers program status, future plans, and potential issues. The Service Delivery Manager is the single point of contact for Service Delivery issues.
- Validation of Delivery - The Service Delivery Manager ensures the actions and deliverables listed below are met by Verizon and are within the terms of the Commonwealth contract.
  - Ongoing performance measurement
  - Statement of requirements
  - Statement of work
  - Program plan
  - Status reports
  - Service level agreement (SLA) management

## Transition and Transformation Management

The Transition Manager will organize and lead the Transition and Transformation Teams. This Transition team will provide key focus on critical transition activities as well as resources to implement the new services, from the moment of contract signing. The Transformation Team will ensure successful migration from the Commonwealth legacy state, through transition, to the transformed future state.

## Financial/Billing Compliance

The Finance Manager will supervise third party vendors and internal Verizon organizations to ensure contractual billing requirements are met. Billing and administration are coordinated to ensure timely and accurate customer billing and TPV invoicing, where applicable.

## Governance

The PMO will monitor the delivery of quality services by driving continuous improvement through a closed-loop, customer-focused process. This process requires the management and joint efforts of all organizations to effectively deliver world-class service, increase satisfaction, and positive cost control.

## Change Management

The Change Manager manages the administration of ordering, provisioning and delivery of network/business services. The change management process deployed by Verizon's PMO relies on systematic procedures to capture, assess, approve and successfully implement authorized changes. This may include data base management and inventory management, to maintain accuracy and integrity as changes are made to the network.

## Performance Management

The Service Level Management Analyst tracks and records a number of project metrics.

- ***Implementation Phase*** - Closely following the signing of a Verizon services agreement, a baseline schedule will be created to track and maintain the activity of functional groups. The Service Level Management Analyst will collect weekly reports to measure on-time performance rates and report this along with financial and technical performance in a weekly status report to Verizon and the Commonwealth's management teams in addition to reviewing it weekly with the account team.



- *Ongoing Operational Phase* - The Service Level Management Analyst will manage the ongoing performance of the services against SLAs and other terms of the contract and provide regular reports to internal management and contractually required reports to the customer. Additional reports are available for network performance report reporting.
  - The Service Level Management Analyst reviews all reports; identifies any issues; creates remediation plans; and delivers a consolidated report regularly to the customer.
  - Reports are delivered in both written and oral presentation form at intervals agreed to in the contract.

## Roles and Responsibilities

Verizon is proposing the following PMO team to lead the Service Delivery of the Verizon solution to the Commonwealth:

### Contractor Project Manager

- Overall Governance and oversight and management of the transition and implementation of the service delivery of the products, services, program solution and resources.
- Facilitate Governance teams
- Customer relationship; single point of contact

### Transition Manager

- Oversight and Leadership over 18-20-month transition to the Verizon solution
- Monitor and integrate current Commonwealth TPV contracts into Transition Plan
- Coordinate, manage and integrate TPV partners into Transition Plan
- Matrix manage implementation teams across products and services

### Operations Manager

- Assumes day to day oversight and management from Contractor Project Manager.
- Oversight of day to day Program from a technical and operations perspective
- Matrix manage all supporting groups, organizations, personnel, and TPVs
- Oversee and management of Customer Satisfaction Program: end users surveys (PC Networks to propose)
- Coordinate integration across all program solution products and services
- Perform monthly Program/Tower review, highlighting successes, failures and recommendations for improvement to Contractor Project Manager – “report card”

- Periodic Customer Status meetings
- Manage special custom projects for customer
- Process and procedure review for continuous improvement

### **Incident Manager**

- Program technical and operational escalations management and resolution, working with help desk and NOCs
- Escalation oversight and back up support for Contractor Project Manager.
- SLA review, compliance, and management.
- Facilitate Chronic issue management and resolution
- Address operational and delivery issues and adherence to performance targets and contract compliance

### **Third Party Vendor Manager**

- Administration and Management of TPV partner contracts supporting the Verizon solution.
  - Organize and supervise any TPV due diligence activity
  - Ensure TPV fulfillment commitments
  - Recommend resolution for vendor service issues
  - Assist TPV issues for implementation/transition support
  - SLA exemption research and documentation for TPV
  - Drive trouble ticket resolution for TPV service incidents
  - Intervene with TPV management to escalate service failures
  - Review TPV monthly reports on service
  - Review and approve TPV invoices for payment
  - Resolve any billing issues

### **Finance Managers**

- ARC/RRC billing support
- Facilitation of consolidated billing process support for one single invoice to the Commonwealth

### **Service Level Management Analyst**

- Prepare and package mutually agreed to data, voice and SLA reports
- Maintain Operations Manual

- Governance performance reporting

## Change Managers

- Oversight and overall coordination of standard change management process across products and services, and across the approximately 32 agencies. Anticipating an annual 5-10 percent MAC activity level.
- Assist with incidents, issues and escalations
- Root cause analysis and resolution
- Change Management future strategy and planning
- Chronic issue management support.

## Achievement of the Commonwealth's Objectives

*The Offeror will describe how its solution fulfills the Commonwealth's objectives described in Exhibit A of this RFP.*

### Verizon Response

#### Commonwealth's Objectives – Fulfilled

In this section, Verizon has addressed each of the objectives listed in Exhibit A to design a comprehensive solution that allows Verizon to meet the current and future business requirements of the Commonwealth. The comprehensive solution will facilitate the Commonwealth's vision to deliver citizen centric services and provide a flexible service delivery model that combines both Commonwealth and Verizon capabilities. Verizon's innovative any-to-any architecture is designed to provide assured application delivery with coverage from the smallest agency location to the largest multi-agency facility.

MPLS Quality of Service (QoS) capabilities improve network traffic prioritization. Application data can be tagged to indicate the packet priority as the data travels the MPLS network. By deploying network premises equipment to leverage MPLS and converged network service capabilities, the Commonwealth realizes the benefit of end-to-end quality of service. Combining network premises equipment with MPLS quality of service provides a statewide infrastructure that supports convergence of voice, video, and data. The result is a cost-effective telecommunications services solutions that provides for interagency collaboration and supports agency efforts to achieve enhanced business value.

Existing Frame Relay and Ethernet networks are used to access the Private IP (MPLS) network. These networks allow Verizon to reuse existing technology and infrastructure for the Commonwealth solution. At the same time, Verizon is investing in new technology and infrastructure, thereby increasing the partnership with the Commonwealth. Verizon is adding MPLS and Ethernet nodes in Harrisburg and expanding the Frame Relay and Ethernet networks in Pennsylvania. These builds will extend the Frame Relay and Ethernet networks, double MPLS capacity in Harrisburg, and bring additional Ethernet services to Harrisburg.

Redesigning the Internet and security solutions enhance the Commonwealth's network security and integrate best practices and Commonwealth policies. The Security Operations Center (SOC) improves security incident response and recovery, collaboration and information sharing capabilities across the Commonwealth. With around the clock security monitoring and management, the security solution can update and enforce the Commonwealth architecture policies and domain standards. This process improves incident response times and minimizes business impact.

Building on the private and public IP network solutions, the voice solution addresses seamless and unobstructed access to government information and services by the agencies and citizens. By aligning technology with business needs, the Commonwealth is available by application, email, Web page, or phone line to the agencies and citizens it serves through the Verizon solution.

## **Future State**

*The Offeror will describe how it will transition and transform the Commonwealth from the current environment (refer to Exhibit B – Current Environment) to a proposed future environment.*

## **Verizon Response**

## **Overall Transformation**

The Keystone Plan emphasized and pursued a shared service-based approach to managing infrastructure, services, data, applications, and customer support on behalf of the agencies and citizens of the Commonwealth. With the desire to deliver improved telecommunication services and maximize the return on investment, the evolution to the future begins with the network.

## **Data Transformation**

The Commonwealth currently uses a network based on an aging ATM technology. This network consists of agency distribution routers and core distribution routers that consolidate Frame Relay and ATM onto two ATM core switches located in Harrisburg.

Verizon's solution replaces Commonwealth High-Capacity ATM circuits with highly scalable, resilient, and efficient Ethernet access circuits. With the fast development of IP technologies, ATM technology, with its many limitations, does not meet the Commonwealth's needs. The cell tax along with the segmentation and reassembly (SAR) overhead of ATM, limits the transmission efficiency and the capacity of the Commonwealth's core network. ATM also has difficulty supporting multicast services, making it challenging to deploy new IP services.

Verizon's deployment of Ethernet includes significant productivity gains, optimized performance and cost efficiencies. Utilizing Ethernet, Verizon can deliver greater bandwidth flexibility enabling the Commonwealth to run data intensive and/or real-time applications between sites at a wide range of speeds. Bandwidth upgrades can be configured easily, remotely and at short notice, to meet evolving Commonwealth needs. Ethernet removes needless and expensive layers of network management thereby reducing maintenance and upgrade overhead.

Verizon's MPLS network is ready to support the Commonwealth and to help the Commonwealth evolve its current network to a Private IP MPLS network that has 20 core switches located in four nodes across Pennsylvania. Access to this network is achieved using the 68 Ethernet switches deployed throughout Pennsylvania. The Private IP network has 647 Cisco switches deployed with 542,964 ports, and 325,838 ports in use. These switches are a combination of Cisco ESR 10008 and GSR 12816 switches.

Through the service delivery model, the Contractor Project Manager in the PMO organizes the communication, meetings, planning, coordination and evolution between the Commonwealth and Verizon. As the Commonwealth identifies the internal project team to work alongside the PMO team, planning, meetings, and reporting begins. As the priorities are identified, one of the first areas for the evolution is COPANET. Each agency will have an approved transition plan that will begin with the data center and include high bandwidth and low bandwidth sites. The transition of sites will be scheduled based on the needs of the agency.

COPANET is a project to convert the Harrisburg Metropolitan Area Distribution Network to a high speed Dense Wave Division Multiplex (DWDM) backbone. Phase I of the project will have 7 locations. Phase II will add an additional 14 locations. Eight – 1Gb Ethernet connections will be used to connect COPANET to the Private IP (MPLS) network. The eight Ethernet connections will be split between two locations. Network access will provide connectivity for both Phase I and Phase II. Service will be delivered from Private IP network to COPANET locations through these Ethernet connections. COPANET will be managed and maintained by Verizon.

High bandwidth locations such as data centers, hub locations, and other agency locations will be connected to the Private IP network via Ethernet. With the help of the Commonwealth, Verizon will determine the transition order for priority locations. These high bandwidth locations will serve as the connection point between existing and evolved networks. As the agency high bandwidth data center and hub locations are connected to the Private IP network, the agency remote locations will be scheduled for evolution.

With the inherent security of Private IP, Virtual Private Networks (VPNs) are used for each agency network. VPNs provide a data separation method that can be extended to the edge of the network. Verizon will build a transition schedule that includes prioritization of agency locations. The scheduling is expected to be about 10 sites a day for approximately 14 months. All sites will evolve onto the new Commonwealth MPLS-enabled network prior to the end of the existing contract.

During the Ethernet installations on COPANET, two geographically diverse security locations will be prepared for the public IP solution. Philadelphia and Pittsburgh are the host cities for the two geographically diverse security locations. Dual 1Gb Ethernet Internet dedicated access connections will terminate at the two security locations. Per the Commonwealth's instructions, a different carrier will provide the internet service at each of the two security locations. Both security sites will be configured with redundant equipment in high availability configurations.

Dual Internet access will terminate on dual routers in a high availability configuration. The routers will be connected to two LAN switches that will provide redundant connections to all equipment in each security location. Two Firewalls in high available configuration will connect to the LAN switches. Three proxy devices will provide Web filtering and load balancing using WCCP. And last, two VPN routers will connect to the switches to allow remote and extranet access through the Internet. Extranet and remote access users will authenticate using the Commonwealth's authentication method.

## Voice Transformation

Existing voice services in the Commonwealth vary from agency to agency. Centrex, key system, PBX and VoIP are installed and in use by agencies. In addition, local, long distance, voice messaging, auto attendant, toll free service, audio and video conferencing, payphones, and miscellaneous telephone equipment is in use by the agencies in the Commonwealth.

Analog and ISDN Centrex service is the largest installed base of voice services today. In tandem with the data evolution, the PMO team will coordinate the voice evolution. Centrex services will be scheduled at about 20 to 25 lines per order and about 8 to 10 orders per day over a period of about 18 months. To follow the Commonwealth's objectives of reallocating resources and reusing technology, Verizon will install new Centrex lines that match the existing Centrex line to reuse the existing handsets. By reusing the handset on a matching Centrex line, the Commonwealth users will not experience any down time and not require any training as a result of the evolution to Verizon service.

Voice messaging services are provided for the approximately 40 percent of Centrex users that utilize or are authorized to have voice messaging services today. Voice messaging services are Central Office based and part of the Centrex service.

A coordinated effort between the Commonwealth, PMO and account team will be needed to document the details of the toll free numbers, routing, configuration and features in use. Depending on contract award, an aggressive delivery schedule may be needed to evolve the 857 toll free numbers from the current provider to the new Verizon service. Online tools are provided to allow the agencies to manage the toll free numbers once they are moved to Verizon service.

Allowing the citizens to reach the Commonwealth agencies is important. Contact centers provide two purposes: receiving communication from citizens and other parties and reaching out to communicate with the citizens of Pennsylvania. Web Center, Verizon's ACD solution, is a business continuity solution. An agent in a contact center can relocate from a normal location to an off-site, alternate location. The contact center employee can relocate from any contact center to any location with network access and a phone line. The employee can then log into Web Center, type in the new phone number, and the contact center agent is back in service. Skill sets, call routing, everything is taken care of by the power of the Verizon network and the Web Center platform.

To continue its public safety care for the citizens of the Commonwealth, Verizon will monitor, manage, and maintain payphones as required in the RFP. To accomplish this, the Verizon PMO will provide the interface to the third-party vendor that will manage and maintain the payphones throughout the Commonwealth.

## Security Transformation

Verizon's deployment of Managed Security includes redundant facilities in Philadelphia and Pittsburgh for optimized performance and cost efficiencies. Utilizing Ethernet, Verizon can deliver greater bandwidth flexibility, thus enabling the Commonwealth to run data-intensive and/or real-time applications over the Internet at a wide range of speeds. Security includes redundant firewalls, intrusion protection, Web filtering and routers and switches to support the security equipment.

To transform the Enterprise security, dual Internet connections will be installed from two carriers in collocation facilities. Managed firewalls will be installed and activated. Then the remaining security equipment will be installed and activated. Once the managed security is installed, activated and certified, the Private IP connections will be installed. Private IP connections will allow the Internet to be available to the Commonwealth agencies through the Private IP network.

Agency security is currently under Verizon managed security services and will not have any transformation. Agencies utilizing the agency security under the existing managed security service will continue to utilize the current service. New agencies that request agency security will be brought onto the new service.

## Offeror Processes and Methodologies

***The Offeror will describe the major processes and methodologies (including any Project Management, incident and problem management, etc.) that it will employ in delivering the services. Brochures or manuals associated with a process or methodology may be included as appendices to the Technical Solution Document, if necessary.***

### Verizon Response

Verizon will establish a dedicated organization using its well established best practices to oversee the implementation and on-going service delivery, management and integration of the Commonwealth's Managed Telecommunications Services.



Through a dedicated PMO designed to drive the service delivery of the telecommunications solution for the Commonwealth and a formal Governance Model designed to manage and lead it, Verizon is committed to building, maintaining and growing a strong and mutually beneficial business relationship and partnership with the Commonwealth.

Verizon is proposing a purpose-built PMO staffed by Verizon and performing the implementation and on-going day-to-day service delivery and management of the proposed solution to the Commonwealth.

## A Joint Commonwealth/Verizon Governance Structure

### Program Management Office

The PMO will play a key role in the overall success of the proposed managed telecommunications solution for the Commonwealth. The PMO will oversee, manage and integrate all the components, partners, deliverables, and timelines associated with the successful implementation and on-going service delivery and management of Verizon's managed telecommunication solution. The ITIL framework will be applied as appropriate.

The PMO will be appropriately staffed with personnel who possess the essential skills and experience to fulfill Verizon commitments to Quality of Service. The PMO will "matrix manage" Verizon internal resources and dedicated staff to fulfill Verizon commitments and Quality of Service per contract deliverables. The PMO will maintain a relationship with the Commonwealth, the Verizon Account Team, and all appropriate third party vendors to support and ensure seamless service delivery for the life of the contract.

As part of the overall management of the service delivery of the Verizon solutions to the Commonwealth, the PMO will have six (6) key functions:

**1. Relationship Management:** to develop, grow and manage the business relationship, communication and information sharing between the Commonwealth and Verizon. Success is measured through information, and the PMO will be focused on collecting, preparing and communicating report documentation as contractually committed to the Commonwealth. The PMO will create and maintain a Communication Plan, per the agreed to Governance Model with the Commonwealth.

**2. Implementation and Transition Management:** to drive the implementation and transition of the Verizon solution to steady state; lead and manage key internal and third-partner partners in delivering the Verizon solution. There are many people, organizations, partners and parties involved in a timely, successful implementation of a Managed Telecommunications Services solution. The Verizon PMO will "matrix manage" the above resources to ensure successful implementation.

**3. Service Management:** own overall accountability of day-to-day operations; managing the ongoing performance of support services against contract terms and service level agreements; the PMO also provides mutually agreed to service and performance reports to the Commonwealth, per the contract definition. The PMO reviews all reports; identifies issues; creates remediation plans, and drives quality and service assurance.

**4. Service Operations Management:** administer performance assurance through monitoring and measurements, and continuous improvement recommendations and plans. The PMO will build and drive mutually agreeable processes and procedures in line with requirements, commitments, deliverables and timelines.

**5. Financial Management:** to monitor and manage the financial administration with the contract, including billing reconciliation support and issue resolution; facilitating contract activities through the life of the contract and monitoring compliance to terms and conditions.

**6. Technical Services Management:** to evaluate and propose new technology solutions, develop plans to incorporate issue resolutions and assist with the development and monitoring of service performance measurements. Drive technology oversight in the towers and across the enterprise.

The PMO will work closely with the Verizon Account Team and the Commonwealth as a long-term Managed Telecommunications Services partner, discussing and strategizing short- and long-term goals and needs, and beginning preparation for them.

## Integration

The Verizon PMO will work with other service providers, partners and personnel to ensure a seamless integration of managed telecommunication services across the Commonwealth service towers. Integration—across processes, roles and responsibilities, and Governance—is the key to success. During the transition and implementation of the solutions for the Commonwealth, project planning workshops will be facilitated and dedicated to identifying, working through and mutually agreeing to how Verizon and the Commonwealth will do business together to ensure success for the Commonwealth. The service delivery model, including processes and roles and responsibilities put in place will be continually monitored and measured for opportunities to improve.

To respond to the Commonwealth's requirements, Verizon will establish a dedicated PMO to assume responsibility for the operation and management of the Verizon managed telecommunications services for the Commonwealth, acting as the Commonwealth advocate and ambassador.

Verizon Program Management personnel are seasoned managed telecommunications professionals possessing skills in business management, financial management, project management, service management, and telecommunications engineering, on which the Commonwealth can rely to manage their managed telecommunications services.

The Verizon PMO will lead the planning effort for defining the Service Delivery and Integration model. It is a very detailed process that will include key Commonwealth and Verizon personnel, and partner personnel. Stakeholders representing all services, functionality and impacted areas will be identified and engaged. A deep understanding of relationships, interfaces and dependencies will be discussed and diagrammed.

Through this process, an overall Service Delivery and Integration Road Map will be designed and presented to the Governance teams for review, comment and approval. With a Service Delivery/Service Integration plan and design approved, functional groups will be identified to work through all the fine process details, which will be built into the overall Service Delivery and Integration Plan for testing and execution. Ongoing monitoring and evaluation will further strengthen and streamline the model for efficiency and effectiveness. The ultimate goal will be to build and support a harmonized plan and roadmap for the ongoing service delivery and integration of the solution.

## **Incident and Problem Management**

The Verizon PMO will serve as the central governance to support the Commonwealth's Incident and Problem Management process. The support and implementation of this process will include coordination with the Commonwealth end user community as well as third party vendor systems and processes.

Verizon employs a streamlined and automated process by which the Commonwealth's outages and issues are identified, managed, and communicated. In the event an outage has been identified and a ticket generated, Verizon can notify pre-established Commonwealth contacts via pager, messaging, email or phone call.

Verizon will leverage its automated processes and tools as Verizon adapts to predefined Incident Resolution activities, which will conform to Commonwealth procedures for change control, third party management, and root-cause analysis for incidents. Working directly with the Verizon PMO will be a dedicated Engineering Consultant who will serve as the Commonwealth's advocate in providing reports related to network performance, incident resolution, trouble history, and change management activities. In addition, the Commonwealth's Engineering consultant will be able to assist with managing potential chronic network-related issues while assuming a leadership role in developing appropriate actions in driving these issues to closure.

As a part of Verizon's governance model, Verizon will create mechanisms from which status on Open Action Items (OAI) or incidents will be communicated to the Commonwealth during a mutually agreed on timeframe. This will ensure the Commonwealth is continuously apprised as to the status of the managed telecommunication services while establishing an environment of ownership and accountability for Verizon.

As the Commonwealth's network continues to evolve based on requirements for growth, application development, and overall usage, Verizon's use of its internal management and reporting tools will enable Verizon to proactively track the

Commonwealth's network performance and stability while making recommendations to continually optimize the Commonwealth's network infrastructure. If network upgrades, CPE procurement, circuit augmentation, or application development is required as part of Verizon's recommendations, Verizon will also ensure appropriate costs are delivered to the Commonwealth as part of these recommendations.

## Project Escalation

The PMO is responsible for the "concentration of accountability." The PMO is dedicated to a successful overall project implementation, rather than to any one functional area. The PMO assumes full responsibility for the performance of all project activities while ensuring that the Commonwealth's requirements are delivered on time and in a quality manner. All project team members report directly or by dotted line into the PMO.

The position of Contractor Project Manager is one of high visibility and receives executive management attention at Verizon. The consistent use of project management processes by the PMO has proven to be successful on many major projects undertaken with Verizon's valued customers. However, any incidents in a project for the Commonwealth that cannot be resolved at lower levels will ultimately be escalated to the PMO Contractor Project Manager.

## Issue Management

The Verizon PMO will provide an important function as part of the oversight to the service delivery of the solution, from transition through steady state. As part of the ongoing management and oversight of the service delivery of the solution, the PMO will play an important role in assisting with issue resolution and escalations. The PMO has insight into and across the solution areas that will help to drive more efficient, seamless resolution with less impact on the day-to-day business. The PMO will assist by bringing together all the critical resources necessary to bring closure to issues and escalations, and driving important communication to Management that will allow them to make the business decisions they need to make regarding a situation.

For all issues that occur during the transition phase of this network, the Transition Manager in the Gov/Ed Project Management organization will capture and document all items as Open Action Items (OAI)s and track them on a separate spreadsheet. The Transition Manager will be the primary person responsible for maintaining and tracking all project OAI)s. The Transition Manager will hold all assigned task owners accountable to resolve all assigned tasks by the critical resolution date. The OAI spreadsheet will be reviewed and updated on a weekly basis during each Transition-In project call.

The OAI reporting criteria consist of the following items to be tracked by the Transition Manager:

OAI #:
Task:
Owner:
Critical Resolution Date:
Status: OPEN, CLOSED, LATE
Comments:

If the Transition Manager is unable to achieve issue resolution, the issue will then be escalated to the Contractor Project Manager who has overriding responsibility for tracking and resolving all issues on the project.

## Project Management

The Verizon PMO will provide the oversight and management of the service delivery of the solution areas, from transition to steady state.

The PMO management activities are divided into two (2) phases:

- 1) Transition and Implementation**, during which management of the in-scope services will be transferred to Verizon and new services implemented or optimized; and
- 2) Operational Service**, in which the services will be managed to meet or exceed contracted service quality levels.

The functions and the staff of the PMO will change somewhat as Verizon and the Commonwealth move from the Transition and Implementation phase to the Operational Service one phase. During the Implementation and Transition of the solution, the PMO will be managing the Implementation Project Management teams, delivering the day-to-day project management of the solution's implementation.

The Verizon Project Management concept is standard for all major system projects: data, wiring, security, video and network installations. Verizon's Project Management methodology is a comprehensive and systematic approach designed to ensure the Commonwealth a highly professional, well-organized, trouble-free telecommunications system installation.

The Verizon Gov/Ed Project Management team will provide project management services to the Commonwealth. As a major supplier of network consulting, integration, and management, Verizon has developed Project Management as a basic core competency throughout the entire organization. Gov/Ed Transition Manager follows the PMI approach to project management and pursues PMP certification for all personnel.

## **Project Management Methodology**

The methodology provides a structured, consistent process for initiating, planning, executing, controlling, and closing projects throughout the full lifecycle, and is ISO 9001 certified. The Gov/Ed Project team will collect all pertinent information necessary to ensure the implementation of the Commonwealth's project. They will work closely with team members throughout the project life to ensure contractual conformance, identify potential problems, set and adjust priorities, and redirect activities as necessary to achieve the goals of the project. Contractor Project Manager is the single point of contact to the Commonwealth on all project issues.

Upon contract signature, the Transition Manager will meet with the Commonwealth, the Account Team, the Verizon Implementation team, and the Commonwealth's Project Executive to develop a comprehensive project plan. During this planning phase, guided by the Commonwealth's specific requirements, they will apply the first six steps of its project management process to ensure that a complete understanding of the project exists before proceeding with implementation. The first six steps include these:

- Perform Factor Analysis
- Document Deliverables
- Define Change Control Procedures
- Develop Work Breakdown Structures
- Estimate Tasks and Environment
- Finalize Schedule

## **Project Communications**

During the planning stage, Verizon and the Commonwealth will develop a formal communications plan. The communications plan will define the frequency of scheduled project team meetings and outline requirements for project status reports, as well as meeting minutes, action item status, and project task completion.

Formal communications are the key to initiating change and determining when a project milestone has been reached. The Transition Manager will hold regularly scheduled review meetings with the Commonwealth as outlined in the communications plan. The Transition Manager will prepare and distribute written meeting minutes after each meeting.



As the single point of contact, the Transition Manager acts as the liaison between the Commonwealth's Project Manager and the entire team. Communications between all parties will include project status reports, meeting minutes, and action item status. This also includes communication with all appropriate team members to confirm that all tasks are successfully completed.

## Scope Management

The Transition Manager will analyze, review, and obtain approval for all requirements and deliverables by completing a stakeholder analysis, identifying measurable and testable requirements, and documenting them. The Verizon project team will meet with the Commonwealth to confirm and record the expected project results.

## Project Management Resources

The Transition Manager techniques and procedures are well established, and Verizon's Transition Managers have the requisite experience to ensure the successful implementation of every system Verizon installs. Verizon's experience with large and complex projects has taught that planning and providing a cohesive support team is critical to the success of the project. Team members are selected for a project based upon their technical/managerial expertise and proven track record.

All team members, including subcontractors, report to the Transition Manager. This single point of contact ensures predictability, timeliness, accuracy, and consistency. This enables the Commonwealth to focus on its core competencies while Verizon manages the successful implementation of the project.

## Change Management and Refresh

***The Offeror will describe its approach to the Change Management and refresh requirements in this RFP. The Offeror will describe general procedures associated with changes to the technical environment, including general policies and procedures, any incorporation of existing Commonwealth practices, change requests, reviews, Offeror and Commonwealth approvals, escalation, and implementation. The Offeror will also describe its approach to meeting the requirements associated with the refresh of equipment and software.***

## Verizon Response

## Change Management

The Verizon PMO will establish a mutually agreed to Change Management process based on the Commonwealth's Change Management and Release Management requirements and policies. The Verizon PMO will coordinate planning workshops to review and evaluate these requirements and policies with key Commonwealth and Verizon personnel, and Verizon will put forth processes and procedures to help ensure integrated, compatible processes across each service area (e.g., voice, data, security).



In the event that a Party determines that a Change is required, the following represents the procedure that shall be executed:

- The Party determining that a Change is required shall initiate a Change request to the other Party.
- Each Party shall evaluate the Change request as follows: i) within a period of thirty (30) days or at a mutually agreed on timeframe, the Parties shall convene to determine the action to be taken on the Change request; and ii) in the event that only the Commonwealth believes the Change request needs to be implemented, the Parties shall enter into a discussion or negotiation in good faith within such thirty (30) day period, so that a mutually agreed to position can be established, including any financial adjustments that may be required.

A Change request can be initiated by either Party's Change Management team and shall be identified by a unique number and kept in a central and shared log managed by Verizon. Change requests with respect to Exhibits shall be continuously updated with their progress through the Change management process described here. A Change request shall have the following initial key content:

- Person and Party requesting the Change
- Date of Change request
- Unique number of Change request
- Services to which Change request relates (or generic request)
- Objectives of Change request
- Description of Change request
- Suggested named persons from Verizon and the Commonwealth who shall be responsible for the evaluation of the Change request

### **Evaluation of Change Requests**

Change requests shall undergo an evaluation by both Parties through the service management team, and the results of such evaluation shall be documented in a manner that includes the elements below. The content of the evaluation should contain at a minimum:

- Confirmation of a Change
- Date of evaluation
- Impact/risk analysis
- Knowledge transfer impact
- Financial impact
- Legal review (if required)
- Recommendation including Change activities and plan

- Documentation requirements
- Suggested review team and approval level

Both Parties shall contribute to the evaluation as appropriate, and the conclusion of the evaluation shall be recorded with the original Change request.

### Change Management Process

Change Management Process	
Activity	Authorization Process
Initiation of Change request	No formal authorizations are required, but the Manager of the person who wishes to initiate a Change request shall review the request before it is submitted to ensure it is reasonable. Such Party's Manager shall also quality assure the content of the request.
Evaluation of Change request	The Parties' Managers develop an agreed to evaluation and recommendation document associated with the Change request, which may include differences of opinion if differences cannot be resolved between the Parties.
Service management team review	If the Change request evaluation is deemed to meet criteria of a technical Change that is not material by both Parties, authorization for the technical Change may be made by the service management team. Authorization for all other Changes may be made by the service management team or may be escalated to the steering team for review. If the Change request evaluation indicates that the financial impact over the remaining term of the Agreement exceeds the authority for the service management team, then the Change request shall be escalated to the steering team for authorization.
Steering Team review	If the Change request review and evaluation indicates that the financial impact over the remaining Agreement term exceeds the authority level for the steering team, or otherwise determines the Change should be escalated, then the Change request shall be escalated to the Executive Team for authorization.
Executive Team review	The executive team shall review and authorize any Change request that has been escalated to this level subject to the authority level for the executive team.

## Refresh Requirements

The telecommunications world is changing as the trends of convergence, consolidation, Internet and mobile communications come together. Significant changes will be brought about by this rapid evolution in technology. With these changes, deciding when to take advantage of new innovations and systems is challenging, and Verizon is uniquely positioned to help the Commonwealth with the transformation, providing operational and economic efficiencies through simpler, cost-effective products and services.

With the convergence of the network, IT and professional service industries, Verizon has developed a strategic roadmap to successfully evolve its business beyond its leadership in the networking and communications business so that it can better serve the Government and Education Market. In general, Verizon looks to increasingly bolster its existing capabilities in the IT and Professional Services space as part of its global strategy. Either through organic development, acquisition, strategic alliances or other means, Verizon will continue to expand its global IT solutions portfolio. At the same time, Verizon will also grow its Professional Service business, thereby helping to ensure that Verizon has the most talented personnel to provide solutions to meet its customers' needs.

Verizon would welcome the opportunity to collaborate with the Commonwealth on the development, trial and integration of new and innovative technologies to support key business initiatives. For the Commonwealth, this means it would become an integral part of the development process from the earliest stages, and it would be able to take advantage of intelligence derived from this process. More importantly, the Commonwealth could truly leverage the most advanced IT infrastructure to support its business operations, thereby making the Commonwealth's services available to its constituents along with reducing the cost to deliver those services.

Verizon carefully monitors the market through a number of vehicles. Verizon's goal is to look for innovations and emerging trends as early as possible that can be leveraged to add efficiency to its business and to bring new capabilities to market in support of its customers.

These vehicles include research done by Verizon's Strategic Initiatives organization. This group is focused on innovations that might make third-party companies attractive acquisitions for Verizon or with whom Verizon might collaborate to jointly offer services to market. For instance, Verizon has made a number of acquisitions in recent years of companies who are leaders in their respective fields.

Verizon is regularly alerted to innovative companies in the marketplace through other vehicles, including traditional market research, regularly communicating with a breadth of industry analysts, monitoring the trade and business press and through interaction with its customers.

Verizon has a large field sales organization that makes tens of thousands of contacts with customers each day. Verizon regularly shares information with regard to market innovations and emerging technologies, and its customers provide their input and experience working with many emerging technologies and niche or emerging vendors. To capitalize on the knowledge inherent in the organization, Verizon's Marketing and Specialized Services organizations regularly gather information and requirements from Verizon field organizations to inform their research and development efforts.

Finally, Verizon's Technology Organization, a group that provides technical and architecture support to Verizon, acts as an R&D organization, evaluating new technologies, market entrants, and considers technologies that could be applied to the business problems of its customers. Verizon will provide technology innovation forums through the Verizon PMO to be established for the Commonwealth during the life of the agreement.

The Verizon PMO is designed to act as the Commonwealth's advocate for changing technology trends. The purpose of this role is to take action in the best interest of the Commonwealth. Through this role, The Verizon PMO will have a strong internal focus on the importance of technology refreshment and replenishment, with short-term and long-term purpose and impact.

The Verizon PMO will have access to engineering and technology expertise dedicated to the ongoing evaluation, application, management and implementation of a mutually agreed to technology refreshment and replenishment program. The Verizon PMO will oversee and facilitate dedicated and focused planning workshops to review and understand the Commonwealth's requirements for a Technology Refreshment and Replenishment (TR&R) program, and Verizon will establish a mutually agreed to plan that will monitor current technology in place, evaluate advanced technologies available, consult and recommend opportunities of growth and advancement, and implement sanctioned tech refreshment and replenishment plans.

The Verizon PMO will organize formal procedures and timelines for network design discussions, technology findings and reviews and recommendations for presentation and discussion with key Commonwealth and Verizon personnel and the Governance teams to determine strategies for accomplishing next steps and overall implementation plans. The Verizon PMO will conduct formal, periodic reviews of strategies, plans, and timelines focused specifically on the TR&R program. The Verizon PMO will ensure all the appropriate expertise and executive support are engaged and accountable.

Verizon will also regularly share its observations with the Commonwealth, seeking perspectives and experiences to validate what Verizon believes could be turned into Commonwealth solutions. This communication ranges from informal to formal, and will be a regularly scheduled component of the periodic engagements with Verizon PMO. These discussions often lead to lab validation, non-standard solutions development, and field beta tests of services prior to their broad commercial availability.

When Verizon identifies new technologies that can be beneficial to the Commonwealth, Verizon will provide information and documentation that describes the new technology, identify the benefits and functionalities to be gained by using the new technology, and specify an approach and prospective costs to implement the new technology. Prior to the launch of Verizon services that incorporate niche developments, Verizon will provide a mechanism for the Commonwealth to deploy these technologies through a special “non-standard solutions” process. The process is designed to ensure that Verizon gains technical validation and operational commitments from all parties inside of Verizon involved in delivering service to the Commonwealth.

Verizon has a mature process for evaluating the requirements to establish non-standard solutions for its customers today, often involving niche or emerging technologies or components as part of a larger solution. The Commonwealth could choose to be actively involved in the testing and validation of these technologies, leveraging resources such as Verizon’s Customer Test Center (CTC), in Richardson, Texas. This center serves as an incubation center to test the Verizon portfolio of standard and custom solutions, as well as beta/emerging products not yet released in a safe, production-simulated environment.

In this facility, Verizon engineers can deploy new technologies on Verizon global networks, build test-bed environments that simulate Commonwealth or Verizon infrastructure, test the impact of various levels of traffic/user loads on a niche technology, etc., as a precursor to a field trial. CTC testing is generally a component of the non-standard solution process, thereby validating the operational readiness and prospective benefits of the technologies and specific implementations identified for a solution, and documenting configuration and other information for operational groups.

As part of this solution process, Verizon is offering three-year technology refresh services to enable the Commonwealth’s edge equipment to evolve with Verizon’s infrastructure. As part of Verizon’s solution to provision equipment as a managed service offering, Verizon is proposing its Certified CPE Catalog. Verizon’s Certified CPE Catalog offers a variety of Customer Premises Equipment (CPE) that meets the voice and data needs of the Commonwealth. With this program, agencies may acquire CPE and communications services from Verizon, and with an extensive product line from leading CPE vendors, equipment is readily available for a broad range of communications needs. Verizon’s CPE Programs offer competitive pricing, flexible payment options, and a single point of contact for equipment service and repairs. Verizon configures, installs, and provides full maintenance and management on all catalog-provided equipment, thereby allowing for seamless integration with Verizon’s services.

In today’s fast-paced environment, it is hard to predict how technological and economic changes will affect business. Technology Refresh is a mechanism that accommodates change in the Commonwealth’s future business needs. It gives the Commonwealth the freedom and flexibility to upgrade or add to its systems at any time without the worry of technology obsolescence.

## Offeror Key Assumptions and Dependencies

*The Commonwealth will rely upon representations made in the Offeror's proposal. The Offeror must therefore identify key assumptions and dependencies on which it has based its proposal including any the Commonwealth personnel, financial, or operational retained responsibilities. The impact on schedule or functionality (including Service Levels) of any of the Offeror's assumptions must be presented to the Commonwealth in the form of a written question. If no impacts are specified, then the Commonwealth will assume there are none.*

### Verizon Response

Verizon has identified the following key assumptions and dependencies on which it has based its proposal.

#### General

Assumption: The inability to conduct timely meetings with Commonwealth personnel may affect the project schedule.

Question: Will Commonwealth personnel be available to meet with Verizon to develop and approve required Scopes of Work for all services proposed?

#### Voice Services

Assumption: The Commonwealth will provide information required by Verizon to support the voice transition.

Question: Will the Commonwealth provide information required by Verizon to support transition in the following areas?

- ACD environment
- Toll Free Enhanced Call Routing
- Automated Attendant and Voice Messaging
- Voice CPE to be maintained

Assumption: The Department of Health wiring is suitable to support VoIP.

Question: Is Department of Health wiring suitable to support a VoIP environment?

#### Managed Security Services

##### Security Architecture

Assumptions: The enterprise Security solution designed and included in the RFP response is based on the below sizing assumptions and provides for significant growth. If the assumptions are inaccurate or vary significantly from what the Commonwealth has in place today, then the solution will have to be re-sized to fit those assumptions.

Question: Are the following sizing assumptions in line with the Commonwealth's Enterprise environment?

- 2 geographically diverse locations each with 400 Mbps of Internet access bandwidth
- 75,000 users in the current Commonwealth environment, with potential growth up to a 100,000 users
- 3,000 remote access users

### **Device Management & Integration, Intrusion Prevention Systems**

Assumptions: Verizon can manage existing Security devices at the agency level or design and procure new devices. If Verizon has to procure and design new solutions, it will be an additional cost to that provided in the RFP response.

Question: Will the Commonwealth give Verizon access to existing firewalls and IDS/IPS at the agency level, or will Verizon have to spec out and develop a new solution for each agency?

### **Authentication, Remote Access**

Assumptions: Verizon can integrate with either of the below existing solutions or also design and provide a new authentication solution. Any new solution developed would be at an additional cost to that provided in the RFP response.

Question: Will the Commonwealth require the Remote Access solution to integrate with the existing PIV or Active Directory solutions already in place at the Commonwealth?

### **Web Content Filtering**

Assumptions: The solution proposed only includes proxy, URF filtering and reporting capacities. Anti-virus functionality could be provided at an additional cost to that included in the RFP response.

Question: Will the Commonwealth require anti-virus capability as part of the Web URL filtering solution?

### **Email Scanning**

Assumption: Change in the number of users would change the costs associated with this solution in the RFP response.

Question: Are the following sizing assumptions in line with the Commonwealth's Email scanning solution: 75,000 users?

### **COPANET**

Assumption: The Commonwealth's Phase 1 and Phase 2 COPANET project implementation will be complete at time of contract signature.



Question: Can Verizon assume that the Commonwealth's Phase 1 and Phase 2 project to implement COPANET will be complete at the time of contract?

Assumption: COPANET fiber will be certified.

Question: Will the Commonwealth provide certification of COPANET fiber infrastructure?

## II-3. Transition Plan

***The Offeror must provide, as a separate Microsoft Word document, a file entitled "Offeror-Name Transition Plan.doc". A project plan may be included as an appendix to the Transition Plan as a Microsoft Project file. The project plan will indicate the specific tasks, timeframes, resources, and responsibilities associated with the transition activities.***

***The Offeror's Transition Plan should be developed to ensure the support and management of the Commonwealth's campus backbone network ("COPANET") is included.***

***The Offeror will explain how, when and where it will implement the services. The Offeror will further describe how it will transition services from the Commonwealth's current environment (including any components of the environment managed by third parties) to the Offeror's proposed solution. The Offeror should also provide an estimate of any required Commonwealth resources, in which locations and for how long, in order for the Offeror to implement its solution. The Offeror's estimate of required Commonwealth resources will be used by the Commonwealth for planning purposes only. The Commonwealth makes no guarantees on the commitment or availability of these estimated resources. Additionally, the Offeror should provide the Commonwealth with an understanding of how the transition plan minimizes the Commonwealth's execution, operational, financial and business risks relative to the recommended solution.***

### Verizon Business Response

## Introduction

This Verizon transition plan for the Commonwealth managed telecommunications services addresses overall objectives, project governance, and risk mitigation strategies. The plan presents a logical breakdown structure for repeatable task execution by specialized Verizon implementation teams throughout the transition. Individual phasing and task items are depicted in a more detailed level in the attached Microsoft Project plan.

The Transition and Transformation program has been developed based on the information provided from the RFP and the Question and Response documents. In addition to this information, Verizon is able to draw upon its extensive experience of having had a local team support the Commonwealth agencies for the past 20-plus years as a network service provider and as the current managed services provider for 27 agencies.

Verizon has also included on its team partners who currently provide some of these services for the Commonwealth or who have worked with the Commonwealth closely on other large initiatives. Black Box, Adept, and Verizon Public Communications are

all well known to the Commonwealth, and their knowledge of the Commonwealth's voice CPE maintenance, help desk, and pay phone requirements will provide the necessary information to make this transition flow smoothly. This greatly reduces the need for Commonwealth personnel to provide basic institutional knowledge.

Using this extensive baseline information, Verizon will collaborate with Commonwealth personnel to confirm assumptions and crystallize the plan into the final form. The plan will then be implemented primarily by specialized Verizon teams executing Commonwealth pre-approved tested scripts and site schedules. Designated Commonwealth technical and business managers will receive ongoing transition status and incident reporting. Incident reports and issues resolution will follow a Commonwealth-approved process and escalation cycle.

The Transition Plan and the Project Schedule will be refined in a due diligence phase after contract award, and all changes will be published under version and issue control.

Pre Implementation Key Milestones	Completion Date
RFP Submission	3/3/2009
Verizon presents RFP to the Commonwealth	3/24/2009
Verizon provides RFP response clarifications	3/31/2009
The Commonwealth Selects Verizon as Vendor	4/14/2009
Verizon begins Due Diligence	4/14/2009
The Commonwealth and Verizon Contract Discussions	5/26/2009
The Commonwealth and Verizon T&C Discussions	5/26/2009
The Commonwealth and Verizon finalize documents for approval	6/23/2009
Letter of Authorization to Start - Contract Signature	6/24/2009
Project Completion - Network	1/11/2011

## Transition Objectives

The Verizon approach to transition is designed to be unobtrusive to the Commonwealth, thereby ensuring that the evolution from the legacy to the next-generation network is done without a disruption to the Commonwealth's core business operations. Utilizing Verizon's comprehensive processes and methodologies for transitioning and transforming client networks, Verizon is able to provide a risk-mitigated solution utilizing appropriate subject matter experts (SMEs) and trained professionals. Under the auspices of its Program Management Office (PMO), Verizon will design, engineer, implement, and manage the entire Commonwealth telecommunications environment.

## Approach

There are various components and levels of the Verizon transition plan for the Commonwealth. Verizon will use best practices of project management, such as those sanctioned by the Project Management Institute (PMI) and the Infrastructure Technology information Library (ITIL v.3). At a high level, the Verizon project plan will manage the Commonwealth's transition following PMI concepts, thereby helping to ensure limited disruption to the Commonwealth's business.

Careful planning and skilled experienced resources are the key to providing an efficient and flawless transition. The general approach taken by Verizon is to divide the totality of the transition into Service, Demographic, and Phase components. This allows for the compartmentalization of three to four thousand locations into a more manageable number of sub groupings. This also enables simultaneous transition of different geographic locations at the same or overlapping dates.

In addition, the majority of all locations can be categorized into a finite number of profiles (approximately 10) representing a common set of similar data and voice configurations. Verizon will develop a set of conversion scripts (executable steps) that can be applied repeatedly to all sites of a given profile, thus simplifying, standardizing, and mitigating the risks of conversion.

## Project Initiation

In order to divide the totality of the network services transitioning into manageable component segments, Verizon proposes the following for organizing all services and Commonwealth locations into manageable project elements.

### Major Work Elements

- WAN Device Management Transition
- Internet Services
  - Philadelphia
  - Pittsburgh
- Harrisburg Core – COPANET
- State-Wide Agency Core
  - Large Agency Remote Connections
    - \* Office of Administration (OA/OIT) ~ 100 Circuits
    - \* Department of Public Welfare (DPW) ~ 200 Circuits
    - \* Department of Transportation (PENNDOT) ~ 200 Circuits
    - \* PA State Police (PSP) ~ 200 Circuits
    - \* Department of Environmental Protection (DEP) ~ 200 Circuits
    - \* Department of Conservation and Natural Resources (DCNR) ~ 200 Circuits

- \* Department of Health (DOH) ~ 150 Circuits
- \* Department of Labor & Industry (L&I) ~ 150 Circuits
- \* Commonwealth County Network (CCN) ~ 75 Circuits
- \* PA Public Television Network (PPTN) ~100 Circuits
- Small Agencies: ~ 1,225 Circuits
- Third Party Vendor (TPV) Service Providers Management
- Voice Services
  - Centrex - 72,872 Lines
  - Analog and ISDN - 4,491 Lines
  - Voice Mail Box - 30,342 Lines
  - PBX Trunks & Key Systems - 301 Lines
  - Automated Call Distribution (ACD)
  - Toll Free 800 Inbound - 857 lines
  - Hosted IP Centrex (HIPC) - Department of Health
- Security Services
  - Security Device Maintenance
  - Remote Access – RAS
  - Email Scanning

The current Verizon Sales, Operations, and Service management team, located in Harrisburg, Pennsylvania and dedicated to the Commonwealth, will be key to the successful transition process. The nine (9) Network Managers who currently support the agencies' data networks will be involved with the transition team and the agencies to make sure the agencies' unique requirements are understood. Verizon's network managers' first-hand knowledge of the agencies' network configurations will aid in the Commonwealth's controlled transition to the Verizon network.

The Sales team, comprised of the four (4) relationship agency account managers and the five (5) technical sales engineers (the Service Area Leads for Service Areas 2 and 3), will assist the transition team in providing an understanding of the agencies' business needs. This team will also assist the Commonwealth agencies in understanding the capabilities of this solution and in ensuring full utilization of the features.

The existing Service Managers supporting the Commonwealth will also continue their support on the account providing insight on the unique service requirements of the Commonwealth agencies. These resources, with their background knowledge of the Commonwealth's requirements and needs, will provide a faster refinement of the transition plan and will eliminate disruptions to the Commonwealth's business.

Category One agencies currently receive most of their transport services for Data and Voice circuits from Level3. These will be transitioned to Verizon. To initiate the process, Verizon will complete a brief due diligence period with Commonwealth SMEs to help ensure Verizon has a clear understanding of the current environment and to validate the Verizon-proposed project plan, time lines, and specific agency requirements.

An initial due diligence process will permit the refinement of Verizon's baseline knowledge, so Verizon can ensure that its planned processes and procedures will work within the Commonwealth environment. Verizon will meet with the larger agency SMEs to validate assumptions in the areas of WAN (data network) and voice network. Verizon will also meet with agency SMEs to gather data as required. Verizon sees the due diligence process running from one to two (1-2) weeks and requiring approximately 20 hours of the Commonwealth's staff time.

The key objectives for due diligence include the following:

- Confirmation and clarification of Verizon assumptions and project plans prior to the start of the program
- Review, modification and confirmation of Transition Plan details and supporting schedules to cover all the transition activities
- Deployment of the Communications Plan
- Implementation of Project Governance and Reporting processes
- Confirmation of Acceptance Criteria to be used on a per-site/per-service basis

The details of the activities, processes and timelines provided in this document will be amended following due diligence sessions with the Commonwealth SMEs. Verizon assumes that the transition period will commence upon contract signature and will last approximately 20 months. This is subject to change depending on the date of contract execution and any other variables unknown at this time. Nevertheless, Verizon is committed to executing the Transition Plan within the prescribed timetable in order to support the Commonwealth's business objectives.

The Transition plan will address movement of the current Commonwealth services to Verizon: WAN, Security, VoIP, Centrex, Toll Free, Pay Phones, PBX/Key System support, Help Desk, Managed Services and Program Management. The existing Network Management Services will not require a platform transition and will remain online capturing vital network information during the transition, such as before and after the conversion site health checks.

The Transition process will start with the connection of the Verizon Private IP MPLS service to the two COPANET locations. Verizon will integrate the COPANET into the Verizon MPLS PIP network to allow for dual connectivity from the Commonwealth location. Four 1GB Ethernet circuits will be installed at 1 Technology Park, and four 1GB Ethernet circuits will be installed at 400 North Street. This connectivity will actually enable buildings connected to the COPANET infrastructure to come on line live at virtually the same time. The COPANET infrastructure will actually support a more aggressive transition.

Verizon will deliver geographically diverse Internet connections with high availability firewalls and security configurations that will be connected directly to the Verizon MPLS PIP core. Redundant 1GB Ethernet connections will be installed in Philadelphia and Pittsburgh.

In a parallel process, Verizon will transition agency key data center and hub sites and then the associated remote sites. Verizon will segment the approximate three to four thousand locations by geography and agency into tiers based on the different service and resiliency levels. The access network will be ordered and then connected to the Private IP network. The service connection will be with either a direct Private IP MPLS connection or a Frame Relay access circuit connected to the Private IP Network. Verizon will continue full responsibility for the associated network managed services.

Verizon will confirm that the COPANET configuration and interconnection with existing data centers and hub sites is complete. Approximately 173 key locations will have 1GB Ethernet connections with the smaller locations being connected by T1 service. Approximately 1,100 remote locations will be connected by DS1 Frame Relay access, and 1,700 remote locations will be connected with direct DS1 access to Private IP.

The Commonwealth voice services, including Centrex, Toll Free, Long Distance, Voice Mail, and ACD services, will be transitioned to Verizon-provided services. The Department of Health's current VoIP service will be transformed to the Verizon Hosted IP Centrex (HIPC) solution. Current PBX and key systems that are to be maintained will also be transitioned to Verizon for support and will be maintained by the Verizon's subcontractor, Black Box. Black Box has a long history of maintaining these systems for the Commonwealth.

## Project Breakdown Structure

The majority of the Commonwealth's locations can be categorized into approximately 10 profiles representing a common set of similar data and voice configurations. Verizon will develop a set of conversion scripts (executable steps) that can be applied repeatedly to sites of a given profile, thus simplifying, standardizing, and mitigating the risks of conversion.

The Commonwealth contains in excess of 3,000 locations geographically dispersed throughout Pennsylvania. Verizon will be able to leverage its 16,000 Pennsylvania employees to help ensure this transition is achieved in an efficient and timely manner. These locations range from single agency locations to large complex data hubs. Verizon will use the existing customer service data base or report data from the current CTMS system to help define the services at a location. Verizon understands that this data exists and is relatively accurate given the central oversight of data by the Commonwealth.



The required data elements of the site record will be as follows:

- **Site Name and Address** – In sufficient detail for geocoding into a workable map
- **On-Site Contact** – The designated technical or business manager responsible for a given site
  - Required to coordinate any required access to the building, conversion plan notification, downtime scheduling, etc.
- **Agency Central Contact for the Building** – The enterprise agency or manager for the site
- **Current Data and Voice Expense** – Useful in prioritizing schedules for maximum return of investment by converting expensive sites first
- **Site Classification** – Data center, major office complex, medium sized office, small office, isolated asset
- **COPANET** – Site subject to special conversion requirements
- **Size Profile** – Based on number of voice lines, telephones, circuits, etc.
- **Special Indicators** – Contains PBX, ACD, specialized voice or data
- **Scheduled Dates (Multiple)** – Site inspection, team visit—if any, equipment refresh—if any, etc.

Verizon, working with the Commonwealth agencies, will refine the site types. The purpose of site type classification is to determine the best order for transition of locations within geographies and to complete the transformation in a timely manner.

## Service Transition

This phase of transition consists of the detailed planning and execution of all aspects necessary for migration of the technical, operational, and managerial responsibilities from the legacy *as-is* environment to the Verizon next-generation platform. The Transition plan is based on information known to Verizon about the Commonwealth environment from the current dedicated account team—the Account Managers, Sales Engineers (Area Service Leads), Network Managers and Service Managers, as well as from additional information provided by the Commonwealth throughout the RFP process. The Verizon transition process will use this institutional knowledge as much as possible to minimize the impact to Commonwealth resources.

The RFP explicitly requests that offerors explain *how*, *when* and *where* they will implement the services. The transition plan presented in this document addresses these questions and also identifies the approximate scope of effort required by the Verizon and Commonwealth technical and business teams. Verizon will utilize the Service Transitioning Template to define the work efforts for each technology and then by each agency/location.

Question	Initiation	Conversion
How	Site Database from data in legacy system Discovery, Confirmation, Validation and tools	Operation scripts by service type may be customized by agency and/or location
When	Per schedule - By Agency, Geography, Prioritization	Individual Site Schedules
Where	Agency ownership and other data for site record	Individual Site Schedules
Who	Verizon and the Commonwealth SMEs	The Commonwealth Primary Site contact – 1 hour per site The Commonwealth Secondary Site contact – as required Verizon as defined by process and technology

In accordance with standard project management practices, the Transition Plan is divided chronologically into the following:

### Transition

1. Initiation and discovery (how) – specify what and how data is collected and validated in the initiation or discovery phase.
2. Granularity of approach (where) – specify the sequencing of conversion scheduling – at the site level, enterprise level, geographic regions.
3. Conversion script – specify the logical set of conversion steps involved per site (enterprise) in play script format.
4. Phasing (when) – specify the logical grouping of tasks for project reporting purposes, such as dividing all site conversions into groups of five (5) phases based on site number or site size.

### Responsibilities

1. List Primary Commonwealth SMEs and Verizon teams (who) – list the teams and responsibilities of the prime participants for systems conversion.
2. List Secondary Commonwealth SMEs and Verizon Team players using RACI format (Responsible, Accountable, Consulted, Informed)

## 3. Scope of effort for the Commonwealth (resources)

- \* Estimate the FTE requirements of the Commonwealth staff in terms of FTEs per site (or other factor)
- \* Total FTEs per service implementation

**Transitioning Responsibility Matrix**

Service	Function / Action	The Commonwealth	Verizon

**R** = Responsible – Performs the action

**A** = Accountable – Owns the action

**C** = Consulted – Is consulted before proceeding

**I** = Is informed, but not consulted

**Risk Mitigation**

1. Conversion rules – List the recommended or required rules for conversion, such as a moratorium on moves and changes, closed conversion windows due to critical business.
  - \* Pre-Conversion Check List – List/Describe the site or environment checks (and methods) that should be made before conversion.
  - \* Post-Conversion Check List – List/Describe the post-conversion checks or validation tests that should be made after conversion.
2. Back-out Plan – Back-out Plan to revert to the old system (if required)
  - \* The transition-to-transformation process will maintain the current service and have the Verizon service delivered in parallel.
  - \* Once the Verizon service has been tested and accepted by the Commonwealth and is ready for activation, the Verizon service will be placed into production.
  - \* The original service will be maintained by the Commonwealth for a defined period after transformation.
  - \* Once the Commonwealth has accepted the Verizon service, the Commonwealth will issue the disconnect orders with the current provider.

## Service Delivery Time Scale

Verizon assumes that the Transition Period will commence upon contract signature. Verizon's Transition Plan is a model that uses a timeline with increments that reflect each phase, and Verizon estimates that the Transition Period will be approximately 20 months. These estimations are based on information provided in the RFP and the Q&A documents and expected services and service locations. Should this information change or these estimates prove incorrect, Verizon and the Commonwealth would likely need to negotiate a different time table.

The following table provides an example of the time needed to perform various transition activities. However, both the dates and the intervals are illustrative only and are subject to negotiations between the parties.

Work Element	Duration (Bus Days)	Start	Completion
Due Diligence and Transition Preparation	54 d	4/14/2009	6/26/2009
Due Diligence			
Transition Preparation			
IT Systems (eBonding)	420 d	6/24/2009	2/1/2011
Verizon HR Staffing	80 d	5/27/2009	9/15/2009
Reporting (SLA and Performance)	90 d	6/24/2009	10/27/2009
Financial Management	30 d	6/24/2009	8/4/2009
Help Desk	52 d	5/27/2009	8/6/2009
WAN Device Management Transition	52 d	6/24/2009	9/3/2009
WAN Implementation	405 d	6/24/2009	1/11/2011
Internet Services	150 d	6/24/2009	1/19/2010
Philadelphia			
Pittsburgh			
Harrisburg Core - COPANET	140 d	6/24/2009	1/5/2010
State-Wide Agency Core	170 d	7/22/2009	3/16/2010
Large Agency Remote Connections	210 d	11/18/2009	9/7/2010
Office of Administration (OA/OIT) ~ 100 Circuits			
Department of Public Welfare			

This document contains Verizon material that shall not be disclosed, duplicated, or used for any purpose other than to evaluate this proposal.

Work Element	Duration (Bus Days)	Start	Completion
(DPW) ~ 200 Circuits			
Department of Transportation (PENNDOT) ~ 200 Circuits			
PA State Police (PSP) ~ 200 Circuits			
Department of Environmental Protection (DEP) ~ 200 Circuits			
Department Conservation Natural Resources (DCNR) ~ 200 Circuits			
Dept of Health (DH) ~ 150 Circuits			
Labor & Industry (LI) ~ 150 Circuits			
Commonwealth County Network (CCN) ~ 75 Circuits			
Public Television (PPTN) ~100 Circuits			
Small Agencies: ~1,225 Circuits	345 d	9/16/2009	1/11/2011
Voice Transition and Transformation	368 d	6/24/2009	11/19/2010
Third Party Vendor Service Providers (TPV) Management	35 d	6/24/2009	8/11/2009
Voice Services	315 d	7/22/2009	10/5/2010
Centrex - 72,872 Lines	264 d	7/22/2009	7/26/2010
Analog and ISDN - 4,491 Lines	192 d	7/22/2009	4/15/2010
Voice Mail Box - 30,342 Lines	290 d	8/26/2009	10/5/2010
PBX Trunks & Key Systems - 301 Lines	150 d	7/22/2009	2/16/2010
Automated Call Distribution (ACD)	60 d	7/22/2009	10/13/2009
Toll Free 800 Inbound - (857 lines)	60 d	6/24/2009	9/15/2009
Hosted VoIP Department of Health	53 d	9/8/2010	11/19/2010
Security Services	133 d	1/6/2010	7/9/2010
Security Device Maintenance			
Remote Access - RAS			
Email Scanning			

This document contains Verizon material that shall not be disclosed, duplicated, or used for any purpose other than to evaluate this proposal.

## The Project Plan

The Project Schedule provides details of the activities and timetable associated with the transition and transformation. Verizon has used the PMI methodology for all of the project planning and will manage all projects in accordance with PMI principles. The Project Plan will be reviewed and assessed by a joint team from the Commonwealth and Verizon during the transition period. This will help ensure that input can be taken from all the appropriate stakeholders with the objective of ensuring the success of the program and mitigating all risk.

A test phase is included in the Project Schedule for each discrete program element. This will allow an assessment of the success of the activity and to provide lessons learned to refine the success criteria and contingency planning and ensure a successful program. Each Test Phase assessment will be held in conjunction with the relevant stakeholders, and the results and subsequent actions will be communicated to the wider team via the Program Governance. There will be a continuous process of review and refinement for all the project plans throughout the Transition Program as further detail is gathered and the delivery environment becomes well understood.

## Project Kick-Off

To initiate the transition, a “kick-off” meeting will be held with the Commonwealth’s primary point of contact. This is designed to ensure team awareness of the following key areas:

- The Scope and Objectives of the Program
- Governance Structure
- Team Roles and Responsibilities
- The Key Processes and Procedures
- Interfaces and Contacts
- The Overall Plans and Schedules
- Interdependencies
- Timescales
- Overall Deliverables
- Risk and Issues Identified
- Methodology and Standards
- Quality Procedures
- Reporting Requirements
- Staging and Installation Procedures
- Escalation Process

## Due Diligence (Initiation) Period

- Joint Commonwealth/Verizon kick-off and planning sessions to clarify the due diligence data and to start refining the program
- Kick-Off Workshop – held post-contract signature with all relevant stakeholders from the Commonwealth and Verizon
- Development of an agreed-on Transition Plan and supporting schedules to cover all the transition activities
- Deployment of the Communications Plan

- Implementation of Project Governance and Reporting
- Development of the Acceptance Criteria to be used on a per-site/per-service basis. Distribution of this Acceptance Criteria will be agreed on between the Commonwealth and Verizon.

## Conversion

- Implementation and completion of the Project Plan transferring operational management of the Services to Verizon
- Integration of the operational processes between the Commonwealth and Verizon

## Operation

- Deployment of the steady state Verizon Program Office for the ongoing service management of the Services
- Implementation of the steady state Governance and Reporting

Transition consists of the detailed planning and execution of all aspects necessary for migration of the technical, operational, and managerial responsibilities from the legacy *as-is* environment to the Verizon next generation platform. The Transition Plan is based on information known to Verizon about the Commonwealth environment from the current Commonwealth dedicated account team as well as from additional information provided by the Commonwealth throughout the RFP process.

Verizon assumes that the Transition Period will commence upon the effective date and will last approximately 20 Months. This, of course, is subject to change depending on the date of contract execution and any other variables unknown at this time.

## Roles & Responsibilities

Verizon places the highest possible emphasis on the success of the transition and transformation program to meet the Commonwealth's requirements as initially defined in the RFP and further defined during the due diligence process. Verizon and the Commonwealth have a very strong positive working relationship today. Verizon believes this relationship creates the cornerstone for a successful partnership and will be pivotal to the success of the overall program. Verizon's common goal of ensuring Pennsylvania's future creates a strong foundation for success.



## The Team Structure and Organization

### Contractor Project Manager

The Program Management Office (PMO) is the focal point for the implementation of the transition program. It will provide a center of expertise for Project Management and control of and support for the Program Management team.

- The Contractor Project Manager will be the lead Verizon representative overseeing the PMO. The Contractor Project Manager has overall governance, oversight, and management of the transition and implementation of the service delivery of the products, services, program solution, and the contract deliverables. This position is dedicated to the Commonwealth and remains in place for the life of the contract. The Contractor Project Manager has direct management of the Service Delivery Manager, the two (2) Transition Managers, the Change Manager, the Incident Manager, the Finance Manager, Finance Analyst, Service Level Reporting Analyst and the TPV analyst.
- This organization will be reduced by one Transition Manager at the beginning of steady state. This fully staffed PMO will continue to support only the Commonwealth as a dedicated organization for the duration of this contract.
- The Contractor Project Manager and the PMO will coordinate and work closely with the dedicated Sales Agency Account Managers, Sales Engineers (Service Area Leads for Service Areas 2 and 3), and Service resources assigned to the Commonwealth. The Sales organization will continue to support the Commonwealth with the dedicated Agency Account Managers and Service Area Leads in place today. These individuals will be supplemented with additional staff, thus resulting in a total of four (4) Agency Account Managers and five (5) Service Area Leads. The Service Management team has dedicated personnel for support of technical, billing management, and order implementation.

### Transition Managers

The two Transition Managers are responsible to the PMO Contractor Project Manager for the delivery of the Transition Program. There will be two dedicated Transition Managers during the conversion—one for voice and one for data. There will be one assigned for the entire contract period. The Transition Managers will lead a team of Project Managers, Field Coordinators, Vendor Managers and other support staff. The Transition Managers will seek regular weekly feedback from the Commonwealth Primary Point of Contact on the progress of the project and the performance of the program.

The key interfaces for the Transition Manager will be the following:

- The Program Management Team
- The Verizon Sales Manager
- The Commonwealth Contractor Project Manager
- The Commonwealth Service Managers
- The Commonwealth Implementation Managers

## Project Managers

Project Managers will be responsible for the implementation of services across the Commonwealth. This structure supports the proposed approach of managing service delivery to all agencies within the Commonwealth simultaneously to achieve the time frames required in the RFP and refined during Due Diligence.

These resources will be managed by the Verizon PMO. All project-related documentation will be stored in a central repository available to all program staff. The Project Office will ensure that status reports are produced on schedule, complete and to the desired standards of quality using the Verizon Quality Assurance process.

The Project Managers will maintain status reporting and will conduct weekly update calls. The reporting and status calls will be completed to ensure the following:

- Project status is understood
- Updates are provided to the Risk & Issue Log
- Recent and planned activities are discussed
- The necessary actions are implemented

All resources on the project will operate to the agreed-on standards and will use the same processes and reporting templates to ensure consistency.

## Service Delivery Manager

The Service Delivery Manager will oversee and manage the end user customer satisfaction program. They will coordinate integration across all program solution products and services. They will perform monthly service reviews, highlighting successes, failures, and recommendations for improvements to the Contractor Project Manager. They will manage special custom projects for the Commonwealth and provide process and procedure review for continuous improvement. This position will support the Commonwealth's solution for the length of the contract.

## Change Manager & Analyst

The Change Manager & Analyst will provide the oversight and overall coordination of standard change management process across all products and services and will assist with problems, issues, and escalations. The Change Manager & Analyst will develop, as required, root cause analysis and resolutions and will provide chronic issue management support. This position will support the Commonwealth's solution for the length of the contract.

## Incident Manager

The Incident Manager will provide support to the Help Desk and NOC—overseeing any areas requiring operational escalations and management resolution. This position will remain in the program for the duration of contract.

## Finance Manager & Analyst

The Finance Manager & Analyst will provide ARC/RRC support and will support billing process requirements for Single Bill. This position will remain in the program for the duration of the contract.

## Service Level Management Analyst

The Service Level Management Analyst will develop a mutually agreed on format to report SLA performance, prepare and package the reports, maintain the Operations manual, and provide governance performance reporting for the life of contract.

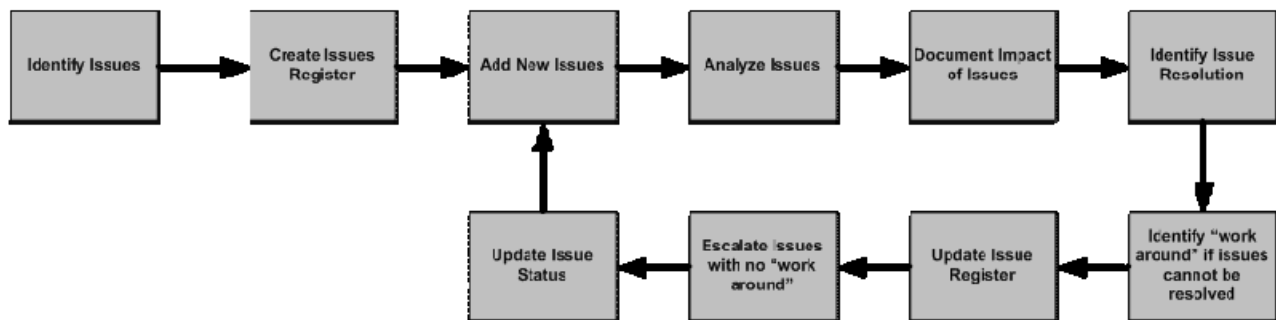
## Third Party Vendor Analyst

The Third Party Vendor (TPV) Analyst will handle the administration and management of the TPV partners supporting the Verizon solution. These responsibilities include organizing and supervising any TPV day-to-day activity, ensuring TPV fulfillment of commitments, and resolving any issues. This position will remain in the program for the duration of the contract.

## Risk and Issue Management

The Transition Manager will be responsible for managing both the risk and issue processes and for engaging the Commonwealth and TPVs for initial and regular input at Project Status meetings. The Transition Manager will maintain the Risk and Issue Registers and provide regular updates on status and identify new risks and issues.

The Issue and Risk Management processes that will be used are illustrated below:



## The Risk Management Process

The objectives of the Risk Management Process are as follows:

- Enable the Commonwealth and Verizon the opportunity to identify risks and contribute to mitigation planning where appropriate
- Provide an opportunity to plan around any identified risks
- Provide an opportunity to plan for areas of uncertainty

- Anticipate and avoid any adverse impact on Commonwealth business
- Avoid, where possible, any delays to project completion and increases in project costs
- Provide a documented process that will be communicated to the Commonwealth as appropriate
- Ensure that all risks and the mitigation strategy is fully documented
- Provide the Commonwealth and Verizon with a view of current risk status through reporting
- Provide a standard escalation path for risks
- **Risk Identification:** Will focus initially on the following:
  - Known generic risks
  - Risks identified by the Commonwealth
  - Areas of uncertainty in the Project Plans
  - Where assumptions have had to be made
  - Where there are constraints
  - Risks already identified by Verizon or the Commonwealth
- **Risk Quantification:** The analysis of probability and impact, and the area of impact, for example:
  - Financial Impact
  - Potentially affects the Project
  - Potentially impacts the Commonwealth's business
  - Potentially impacts Verizon
  - Schedule Affecting
  - Inability to complete deliverables
  - Impact on proposed solution
- **Risk Prioritization:** Which to address first – (High Probability/High Impact)
- **Risk Response:** Identifying mitigating actions or any emergency actions
- **Risk Monitoring and Control:** Weekly review of Status; review any necessary changes to mitigation plan/actions; update Risk Log.

The Risk Register will be subject to a full review and further risk identification exercise during planning workshops, following down select.

## The Issue Management Process

The objectives of the Issue Management Process are as follows:

- Enable the Commonwealth and Verizon the opportunity to identify issues and contribute to plans to resolve
- Provide an opportunity to plan alternatives for any issues
- Provide a process for escalation of unresolved issues
- Anticipate and provide an opportunity to avoid or minimize any adverse impact on Commonwealth business
- Identify any potential delays to project completion and increases in project costs
- Provide a documented process that will be communicated to the Commonwealth as appropriate
- Ensure that all issues and their status are fully documented
- Provide the Commonwealth and Verizon with a view of current issue status through reporting
- Provide a standard escalation path for issues
- **Issue Identification:** The initial Issue List will be agreed on and documented at the first Project Kick-off workshop where input will be sought from the Commonwealth.
- **Issue Review:** The analysis of known issues and the impact, and the area of impact
- **Issue Prioritization:** Assigning agreed-on priorities to issues
- **Issue Response:** Identifying solutions, alternatives or requirements
- **Issue Monitoring and Control:** Weekly review of Status; review any actions taken to resolve issues, and the outcome; update Issue Log and report.

## The Transition Plan

Enclosed is the Transition Plan in MPP and PDF formats.



CoPA Transition Plan V5.1 020509.mpp



CoPA Transition Plan V5.1 020509.pdf

## II-4. Offeror Background and Qualifications

*The Offeror must provide, as a separate Microsoft Word document, a file entitled "Offeror-Name Background and Qualifications.doc". No appendices or additional information will be accepted. The Offeror's Background and Qualifications should cover the topics described below.*

### Overall

*The Offeror should provide information describing its background, services, experience, and qualifications relative to the scope of this RFP. To be considered will be the length, service levels, references, and quality of comparable services provided to other clients. The Offeror should also indicate any additional information that will be helpful to the Commonwealth's evaluation.*

### Verizon Business Response

Verizon Business, created by the merger of MCI and Verizon in January of 2006, combines MCI's long history of innovation (first Frame Relay network, first commercial Provider of Internet Service) and Global IP network, with Verizon's dense local and regional network and the backing of a strong parent company. One of three business units of Verizon Communications, Verizon Business is focused on the needs of Large Business and Government with tens of thousands of customer relationships.

Verizon Business enables enterprises, like the Commonwealth, to tap the strategic potential of your networks by using communications technologies to take your enterprise beyond traditional boundaries. By "extending the enterprise" to more fully integrate constituents, suppliers, partners, and remote workers, the Commonwealth can improve customer service and relationships, increase employee productivity, support better business decisions, improve resilience, and provide your workforce a mobile computing capability to increase productivity.

Verizon has a long history of working with the Commonwealth. For many years we were the network and managed services provider for all Commonwealth agencies. Today, we continue to provide managed network and security services to several Commonwealth agencies, while also providing voice and data network solutions to virtually all of the legislative and judicial agencies. To effectively support the Commonwealth account, Verizon has continued to dedicate an experienced team of Account Managers, Systems Engineers, Customer Service Representatives, Service Managers, Implementation Managers, Network Managers and Network Engineers.

Across the Verizon Business organization we go to great lengths for our customers. This determination and vision pushes us into new markets, helps us create valued solutions, and continually reminds us of the importance of adding value to the network. In the following sections, we will demonstrate the overall capabilities that Verizon Business possesses to support the Commonwealth.

### **Verizon's Commitment to Pennsylvania**

Verizon is not only firmly committed, but has roots within the Commonwealth of Pennsylvania. The proposed voice and data services for the Commonwealth will create a new demand for customer service support within Pennsylvania, thereby creating new jobs and opportunity for Pennsylvania citizens. As part of Verizon's commitment to this opportunity, Verizon will leverage the knowledge and expertise of several Pennsylvania-based Disadvantaged Business Partners throughout the life of this contract.

Verizon's commitment to Pennsylvania extends beyond this opportunity. Verizon currently employs over 16,000 dedicated people in the Commonwealth and pays an estimated \$10 million in taxes annually. Verizon serves the citizens of the Commonwealth with almost 5 million telephone lines and 1.7 million fiber optic miles throughout Pennsylvania. Verizon has contributed \$34.3 million to Pennsylvania's state e-Fund. The award-winning FiOS service is available in over 300 communities and continues along a path of aggressive expansion.

Verizon believes in the spirit of giving back to the communities where its customers and employees live and work, as demonstrated by several partnerships and programs local to Pennsylvania. This deep sense of community involvement is rooted in the foundation of one of the company's greatest strengths—its employees. Verizon employees and retirees have volunteered over 40,000 hours and raised over \$1.1 million for non-profits in the Commonwealth. Verizon's commitment to volunteerism and fund raising efforts in Pennsylvania includes the following examples:

- Allegheny County Library Association in Pittsburgh "Summer Reading Program"
- National Constitution Center in Philadelphia "Living News Program"
- PA Department of Education "Verizon Thinkfinity Rollout Partnership"
- PA Library Association "PA One Book; Every Young Child"
- Police Athletic League of Philadelphia "Boys to MENtoring Program"



## Corporate Information

*The Offeror should provide a narrative describing its background, history, services, and corporate organization. A general overview of the corporate organization is appropriate. If the Offeror is a subsidiary or division of a larger company, this section should concentrate on the operating history of the subsidiary or division which will provide the Services.*

### Verizon Business Response

## Introduction

Verizon Business, a unit of Verizon Communications Inc. (NYSE: VZ), is a global IP leader and network-based partner for delivering integrated communications and information technology solutions to large-business and government customers worldwide. Combining unsurpassed global reach with managed services, security, mobility, application management, collaboration, and professional services capabilities, Verizon Business delivers global solutions that power innovation and enable our customers, like the Commonwealth, to do business better.




While our corporate name has changed over the years, many of the same Verizon team members who have supported the Commonwealth as Bell of Pennsylvania, Bell Atlantic, Verizon, and now as Verizon Business, remain the same. Our Harrisburg team has a long history of working with Commonwealth agencies to solve problems, deliver services and support business needs. We have developed relationships across many agencies over the years and remain dedicated to support the Commonwealth's ongoing business requirements.

## Verizon Communications Inc.

One of the world's leading providers of communications services, Verizon is a strong, financially stable company, as illustrated in the following statistics:

- Annual operating revenues of \$93.5 billion (U.S.) in 2007
- 228,000+ employees (3Q08)
  - 16,000 of which are in Pennsylvania
- Fortune 500 rankings of the largest companies
  - Verizon ranks #17 in the U.S. on the Fortune 500 Ranking and #53 globally in 2008
- A Dow 30 company – Part of an elite list of the 30 American multinational conglomerates which make up the best known and most widely followed market indicator in the world.

Verizon is comprised of three business units, as shown below. Within the Verizon Business organization, we have a segment dedicated to servicing the Government and Education markets due to the unique applications and business needs of the customer base. We pride ourselves in the long-standing relationships we have held with many states across the nation due to our continued focus on government markets.

 <ul style="list-style-type: none"> <li>• 70.8M subscribers</li> <li>• Next-generation, high-speed broadband wireless network</li> <li>• Broadband access in 245 U.S. Major Metropolitan Areas</li> <li>• V CAST mobile content services</li> <li>• Highest customer loyalty for U.S. wireless providers</li> </ul>	 <ul style="list-style-type: none"> <li>• U.S. domestic wireline, local and long distance services</li> <li>• Consumer and small business</li> <li>• Transforming the telecom franchise into a broadband and entertainment business</li> <li>• FiOS Internet and TV</li> </ul>	 <ul style="list-style-type: none"> <li>• Enterprise and government customers worldwide include 98% of Fortune 500</li> <li>• One of the world's largest wholly owned, facilities-based global networks</li> <li>• Manage 250K+ servers, routers, devices</li> <li>• Leading provider of managed information security services in the world</li> </ul>
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## Verizon Business Product Scope

Large enterprises are turning to Verizon Business and our advanced IP, data, voice, wireless and security offerings to help them take advantage of secure next-generation communications, collaboration, and multimedia services and solutions. As a facilities-based telecommunications company, we can provide true integration of services over wholly owned voice, data, and Internet assets. Our ability to provide end-to-end solutions sets us apart from other communications providers. And our tailored solutions allow customers like the Commonwealth to improve operating efficiencies through enhanced technologies, consolidated networks and services, and most importantly, contain costs.

Verizon Business is a leader in Managed Solutions. We have extensive experience managing Commonwealth agencies network environments over the last 20 years, as well as, some of the world's largest enterprise businesses and federal government agencies. We manage over 4,200 networks in 142 countries and more than 250,000 devices. Our portfolio of managed services spans everything from simple monitoring and notification to full configuration and performance management.

Verizon is recognized as a world class leader in security. We have provided security services over the last fifteen years to some of the largest Pennsylvania agencies, and to many of the most sensitive federal agencies. We understand that Commonwealth agencies need to know that data, wherever it is in the world, is secure whether it's within your LAN, traversing your WAN, interacting with partners

or remote workers, or at the desktop - Verizon Business can secure the data at any of these points. We offer security solutions in the areas of: Security Strategy and Consultation; Threat and Vulnerability Management; Identity and Access Management as well as Security and Compliance Programs.

Verizon Business will deliver the full suite of Collaboration Solutions, built on our secure IP network including: IP Telephony, Contact Center, Conferencing, Messaging and Mobility solutions. The ability to allow people to work together using various techniques and technologies whether they are employees working with employees, or employees working with external vendors, constituents or partners will be critical to increase productivity and reduce costs across Commonwealth agencies. Verizon Business has the solutions and experience to lead these efforts for the Commonwealth.

Verizon Business offers an unparalleled product and service portfolio. Our comprehensive solutions portfolio covers enterprise essentials, building networks, helping make them resilient and secure, and managing what runs on your network. We have over 2,700 professional services experts around the world, experienced in the leading technologies that can help the Commonwealth plan, design, implement and manage solutions to meet your most complex communications challenges.

## **Financial Capability**

***The Offeror must be able to demonstrate to the Commonwealth its financial soundness and its ability to remain viable as a provider of the Services over the term of the agreement. The Offeror must provide the following information for Offeror's lines of business that are directly comparable to outsourcing the Services:***

- ***Revenues segmented by telecommunications or managed network business lines***
- ***Revenues from all lines of business***

## **Verizon Business Response**

The Verizon executive leadership is confident our strong balance sheet, good cash flows and diversified business model will sustain Verizon through whatever economic uncertainty may be experienced in the coming years. The Commonwealth can choose Verizon Business as their communications provider for the next ten years with the utmost confidence that you are choosing a provider who will be around for the long term. We have the leadership, vision, strategy and financial resources to continue to grow and expand our services to enable business applications for our customers. This strong financial foundation enables Verizon to weather these difficult economic times and sets us apart from the competition in this marketplace.

As we look ahead, we are getting a better picture of the opportunities being created by the accelerating shift to ultra-high-speed broadband, wireless multimedia and anytime-anywhere applications and services. We continue to roll out the industry-leading wireless, wireline and IP technologies that give us a global platform for providing the next generation of services.

We are focused on delivering reliable, cost effective services in order to meet both our customer's requirements, as well as our shareholders expectations. Our legacy of service is built on a strong foundation of rock-solid values and ethical management – qualities the Commonwealth can count on for the next ten years.

## Verizon 4<sup>th</sup> Quarter 2008 Highlights

Verizon announced 4<sup>th</sup> Quarter 2008 Financial results on January 27, 2009. Highlights, which demonstrate the soundness of Verizon's financial state, confirm growth in our strategic services, and reflect positive revenue growth across our business on a consistent basis are presented below.

Verizon Communications Inc. (NYSE:VZ) today reported that it continued to grow sales of broadband, wireless and strategic business services in the fourth quarter of 2008. Strong customer and revenue growth contributed to 43 cents in diluted earnings per share (EPS) in the quarter, compared with 37 cents per share in the 4<sup>th</sup> quarter of 2007.

On an adjusted basis (non-GAAP), 4<sup>th</sup> quarter 2008 EPS was 61 cents, compared with 62 cents in the 4<sup>th</sup> quarter of 2007.

On an annual basis, Verizon reported \$2.26 in 2008 EPS from continuing operations, compared with \$1.90 in 2007. On an adjusted annual basis, 2008 EPS from continuing operations was \$2.54, a 7.6 percent increase, compared with 2007 EPS of \$2.36.

### Consolidated Results

- 43 cents in diluted EPS and 61 cents in adjusted EPS (non-GAAP), compared with 4<sup>th</sup> Quarter 2007 diluted EPS of 37 cents reported and 62 cents adjusted
- \$24.6 billion in 4<sup>th</sup> Quarter revenues, up 3.4 percent, or adjusted growth (non-GAAP) of 4.6 percent

### Year End 2008 Highlights

The Commonwealth can choose Verizon Business with the utmost confidence that you are choosing a provider who has strong executive leadership with a vision for the future and the intent on remaining financially viable over the long term.

- \$2.26 in 2008 diluted EPS from continuing operations and \$2.54 in adjusted EPS, compared with 2007 earnings of \$1.90 per share and \$2.36 per share, respectively
- \$97.4 billion in 2008 revenues, up 4.2 percent, or adjusted growth of 5.1 percent
- \$26.6 billion in cash flows from operating activities; \$17.2 billion in capital expenditures

- **Total number of FTEs performing managed network services**

### Verizon Business Response

Across Verizon Business there are approximately 1,500 FTEs supporting our managed network services for corporate and government customers globally. Currently, there are 20 FTEs providing support for managed services in Harrisburg, PA.

- **Locations and number of employees in each location**

### Verizon Business Response

Verizon Business supports managed network services from several locations around the world. Locations include:

- Harrisburg, Pennsylvania (ISO 9001:2000 registered)
- Frazer, Pennsylvania
- Cary, North Carolina (ISO 9001:2000 registered)
- Hilliard, Ohio (ISO 9001:2000 registered)
- Jacksonville, Florida
- Ashburn, Virginia (ISO 9001-2000 accreditation in process)
- Albany, New York
- Herndon, Virginia (ISO 9001-2000 accreditation in process)
- Seattle, Washington
- Fremont, California
- Plano, Texas
- Amsterdam, Netherlands
- Felltham, England
- London, England
- Sydney, Australia

- **Employee turnover rate**

### Verizon Business Response

The Verizon Business employee turn-over rate for 2008 was 6.9%.

- *Long-term debt rating (Moody's or S&P)*
- *Total market capitalization*

### Verizon Business Response

The long term debt rating and market capitalization for Verizon are:

#### Credit Ratings - Long Term Issuer

Fitch Ratings	A	11/5/2008
Moody's	A3	10/29/2008
S&P	A	6/5/2008

#### Financial Performance

Period Ended	9/30/2008
Total Capitalization	(\$M) 95,729.00

- *Number of customers to which it provides managed network services*

### Verizon Business Response

Verizon Business provides one of the largest and most comprehensive network management services available today to customers worldwide. We currently provide service for:

4,200+	Customer Networks in 142+ Countries
27	Commonwealth of PA agencies
85,000+	Routers Under Management
207,000+	Total Managed Devices
25,000	Third Party Circuits Under Management

- *Length/total expected dollar value of all contracts in force*

### Verizon Business Response

Verizon Business ranks managed services as one of its premier strategic offerings and a significant contributor to annual revenues. Verizon Business holds multi-year contracts with hundreds of customers around the world, not unlike what is being requested by the Commonwealth. Because of the strategic nature of managed services, Verizon continues to invest in and develop enhancements that will benefit the Commonwealth over the long term.

### Strategic Direction

*The Commonwealth places strong emphasis on the need for a long-term strategy. The Offeror should describe its strategic direction, and the implications of that strategy for the Commonwealth. The Offeror should also indicate the relative size that a future agreement with the Commonwealth would be in relation to the Offeror's revenue.*

### Verizon Business Response

Verizon agrees with the Commonwealth and is deeply committed to placing strong emphasis on having a long term strategic direction. Verizon Business has an extensive history of improving our networks, expanding our expertise and leading the market with innovative communications solutions. Over the last two decades, Verizon has strategically acquired industry leaders like MCI, UUNET, Digex, and Cybertrust to complement our core communication services. Along the way, we've also established a culture of innovation and discovery that will continue to drive our decision making well into the future. Each of our innovations has led to the next. As a result, we've created a powerful set of capabilities that are directly aligned to our customers' challenges.

Verizon Business has a long term strategy to support our customers, such as the Commonwealth, with solutions that will enable key business initiatives like consolidation, shared services, virtualization, unified communications, enterprise security, and mobility. We have the worlds most reliable and robust IP backbone that we will continue to heavily invest in which will enable the Commonwealth to meet evolving business needs. We are focused on performance and execution. We have a long-term strategy to drive convergence of voice, data and video services over a common infrastructure. We also will continue to invest in and enhance our specialized services such as security and unified communications.

The estimated revenue resulting from a future agreement with the Commonwealth is significant over the next ten years -- so significant that we will be able to expand and secure jobs for many Pennsylvania taxpayers. The 7 to 10 year contract with the Commonwealth will make it one of the largest single state government contracts for Verizon.

With Verizon Business, the Commonwealth can be confident that we have the vision, the expertise and the financial resources to carry out a long-term strategy that will empower the Commonwealth initiatives over the next ten years.



## Dedication to Quality

*The Offeror should provide details of its approach to measuring and maintaining high quality services. The Offeror should provide details of any industry-recognized quality standard to which it is, or will become, compliant (including a timeframe for compliance, if not already achieved), as well as any awards received over the past 18 months. Please indicate all quality programs that are externally measured (e.g., Six Sigma, ISO 9001:2000) and how such certifications would directly benefit the Commonwealth. A detailed approach and quality plan should be included in the response to this section.*

### Verizon Business Response

Verizon Business places a high degree of emphasis on the approach to providing and maintaining quality services. In addition to multiple external measurements, such as SAS 70 and ISO 9001:2000 audits, the Verizon Business team embraces the Information Technology Infrastructure Library (“ITIL”) framework and will apply ITIL processes as appropriate to design, deploy, manage, and improve all services outlined in this RFP.

The Commonwealth will benefit from Verizon’s adoption of the ITIL framework through Verizon’s adherence to ITIL’s consistent Service Delivery guidelines across the 10 ITIL Service Management processes.

Examples of the commitment to quality, including some of the external measurements Verizon Business utilizes as benchmarks, include the following:

- The processes and methodologies used to support its managed services portfolio have received a number of standards-based certifications, including ISO 9001: 2000, ISO 27001: 2005 (ITIL rated with leading change processes), Underwriters Laboratories, SAS70 Type I & II and TL9000. In addition, the company holds multiple certifications from industry-leading vendors, including Cisco, Microsoft and SysTrust.
- Verizon Business today handles more than two million help desk calls annually and supports hundreds of thousands of users. As the basis for its delivery of IT Service Desk offerings, the help desk quality management system is ISO 9001:2000 certified and employs best practices defined by ITIL.
- The ITIL Framework is supported through the Verizon Business Network Management tools.
- Customer Processes and Documentation are housed in the Verizon Business Knowledge base on an Internal SharePoint platform and made available to Customer through eBonding.
- Verizon Business continues to sponsor employees obtaining ITIL Foundations Certifications.
- Verizon Business was found to have a strong focus and commitment to delivery of high quality services by Pink Elephant, the world’s number one supplier of ITIL and ITSM conferences, education and consulting services.

- Working with Pink Elephant, Verizon Business is helping to define ITIL best practices within Managed Network Services. As part of the process, Verizon Business was evaluated across 10 IT Service Management processes within two key US Managed Network Services operations centers to establish a foundation for process development and continuous improvement.

Verizon understands the need to train and retain a quality workforce to maintain a network environment as large and complex as the Commonwealth's. Verizon employees have certifications to provide services through many of our Gold Partnerships, including the following:

- Microsoft
- Cisco
- HP
- IBM
- Sun
- Nortel
- Tellabs
- Hitachi

Verizon has provided quality certification information in the table below.

Item #	Certification / Assessment Level	Service Provider Comments
1.	% of ITIL-certified staff - Foundation-level - Practitioner-level - Service Manager-level	Foundation-level: 603 Practitioner-level: 6 Service Manager-level: 1
2.	% of PMI / APM-certified staff	32 PMP-certified staff within the Verizon Project Management Organization. Verizon is actively engaged in developing our PMP certifications.
3.	ISO 9001	Verizon has 48 center certifications across its certified Network Operations Centers. These include 17 certifications for ISO9000:2001.
4.	ISO 20000-1	Verizon Business has become the first telecommunications company in the United States to receive a prestigious international quality certification for its Government Network Operations and Security Center (GNOSC), located in Ashburn, VA. The ISO/IEC 20000 certification is granted

Item #	Certification / Assessment Level	Service Provider Comments
		<p>by the International Organization for Standardization and the International Electro-technical Commission. It's the first international quality standard specifically aimed at IT Service Management and describes best practices and management processes for effectively delivering managed services to meet business and customer requirements.</p> <p>Verizon Business's GNOSC supports the unique security and operational requirements of our federal government customers. It performs real-time monitoring of network traffic for these customers and serves as a single point of contact for both network and security operations.</p> <p>Besides monitoring network traffic and operating as a 24/7 security center, the GNOSC serves as an emergency command and briefing center, and provides offices for program-management and support staff. Diverse cable routing and complete network redundancy are built into the operation of the center to ensure uninterrupted communications for the federal government.</p> <p>The ISO/IEC 20000 certification is valid for three years, with audits performed every six months by a third party. UL DQS, one of the world's leading certification organizations, will perform these audits for Verizon Business.</p> <p>In 2007, Verizon Business announced ISO/IEC 27001:2005 certification for the information security management systems for two of its managed hosting centers in the U.S. and one in the U.K. The company also incorporates the ISO/IEC 27002 standard into its Security Management Program as the basis for evaluating customer security programs as well as complies with ISO 9000 guidelines for its IT Service Desk offerings.</p>
5.	Six Sigma	Verizon draws from a large body of vendor partners and can provide this certification expertise as required.

## Verizon's Commitment to Quality

Verizon's proposal to the Commonwealth of Pennsylvania is inclusive of the company's extensive commitment to quality. The Commonwealth will benefit from Verizon's structured approach to quality, which is described below. Verizon has developed a plan that enhances the Commonwealth's ability to offer its employees and constituents consistent and reliable service throughout the State. The Verizon Business Corporate Quality Department was formed in 1986 to improve the way we do business. It has organizational responsibility to the corporate office, and provides professional resources and skills to all facets of Verizon Business.

The goal of the Verizon Business Corporate Quality Department is to continuously improve the quality of the way Verizon does business. Below we describe some of our quality assurance programs:

- Total Quality Management
- ISO 9000 Registration and Certification
- Customer Focus and Satisfaction
- Selection of Supplier Quality

## Verizon Business - Total Quality Management

Verizon's focus is to continuously improve the quality of the way we do business. This effort includes the institutionalization of Total Quality Management (TQM) throughout Verizon Business. TQM is best defined as a set of management methods that lead to dramatic and continuing improvements in quality, productivity, and customer satisfaction.

Our Quality Management Program is based on the following principles:

- Quality and productivity are enhanced by continuous improvement of processes and the people who change them.
- Management participation empowers the workforce to achieve its full potential.

The purpose of the process is to provide services at a price and quality that represent value to customers.

Verizon's commitment to TQM philosophies and methodologies aligns the activities of all employees with a common purpose: customer satisfaction made possible by continuous improvement in the quality of all processes and services.

We measure the effectiveness of our actions throughout the entire product cycle, from inception through delivery to maintenance. Verizon determines optimal cost levels and can pass the savings on to the Commonwealth by being informed of how much we spend and what value is added by our work.

In following the TQM philosophy, Verizon provides professional implementation of its data and voice services. As you know, service does not begin with the implementation, but with the planning and co-ordination that must first take place to ensure a smooth and transparent transition with no disruption of service. Your Verizon Account Team encourages ongoing communication with our customers to understand your installation and service requirements for development of a successful implementation plan.

As Verizon is committed to a customer's total satisfaction, your Verizon Account Team will continue to bring a high level of focus and awareness to the needs of the Commonwealth throughout the planning, implementation and post service processes. Verizon is sensitive to your business requirements and will work together with you to help ensure minimal impact on services throughout the project.

Compliance with ISO 9000 standards is Verizon's long-term business strategy to enhance the quality of our products and services, improve our competitive position, and increase our profitability. Verizon's commitment to customer satisfaction is reflected by our quest to provide the highest level of quality in our communications services and our pursuit of ISO 9000 certifications in more areas of our business. Verizon submits to annual audits of its ISO compliance by Underwriters Laboratories and successfully passed its most recent audit.

Registration in the areas identified means that Verizon has demonstrated its superior capabilities in supplying products and services that consistently conform to the ISO 9000 Standard. Verizon's major commitment to ISO 9000 certification is reflected in the following ISO registrations:

## **Customer Focus and Satisfaction**

Verizon has a number of ways of assessing and ensuring customer satisfaction:

- Account Team Interaction with Customers
- Vendor Product Evaluation in the Verizon Customer Test Center
- Participation in Industry Standards and Advisory Committees

## **Account Team Interaction with Customers**

The Verizon Account Team is the cornerstone of the relationship between our customers and Verizon. Your Account Team is positioned to help you develop your network strategy, both now and in the future. They will explore your requests within the Verizon organization and provide complete solutions. Our Product Marketing Group pays particular attention to Account Team requests and they can identify trends as they emerge. This leads to new and better products and services.

Especially with the introduction of wide-spread Internet usage, there is a growing customer demand for more visual penetration into the network structure and use of interactive tools over the Internet. Verizon is a pioneer in this application, providing general access for corporate network statistics over the Internet as well as customer access to specialized tools for traffic reporting and analysis. This is a direct result of customer/Account Team feedback.

## Verizon Customer Test Center

Verizon's Customer Test Center (CTC) is a multi-million dollar facility that offers our customers and vendors the hands-on experience of testing proposed network, hardware, and software solutions on Verizon Business's live production networks. The CTC offers customers the maximum in safe and flexible product and customer testing. Thirteen (13) secure lab rooms can be individually configured with network and hardware requirements to fit any testing needs. Common test types include:

- Interoperability - Do selected/multiple devices work with each other as needed?
- Proof-of-Service - Does the proposed solution work?
- Baseline - What is the application's bandwidth utilization?
- Characterization - What is the application's Wide Area Network (WAN) performance?
- Performance - Does the application's WAN performance meet its requirements?
- Vendor comparisons - Which vendor product delivers the needed features and functionality?

A team of CTC engineers will provide you with a thorough investigation geared to address the specialized testing needs of your particular customer, product, or vendor device. The CTC also collaborates with other Verizon organizations as well as third-party vendors as needed to bring in specialized equipment or expertise for a specific customer test.

## Participation in Industry Standards and Advisory Committees

Verizon has a division dedicated entirely to ensuring we are active and represented with all the appropriate telecommunication standards bodies. Technical Standards Management (TSM) is located in Richardson, Texas at our Campbell Creek facility. The mission of the management and staff is to manage and influence global telecommunications industry standards and inter-industry forum issues. This is consistent with Verizon's business, strategic, and regulatory goals and policies and also assists Verizon's Office of the General Council with intellectual property development.

Technical Standards Management oversees Verizon's participation in key industry forum and standards activities worldwide. TSM provides a corporate focal point that also brings market issues to these technical forums where consumer input is balanced with the technological advancements. Being an integral part of the standards-setting bodies helps Verizon in deploying the latest technology advancements to benefit our customers.

## Selection of Supplier Quality

Verizon makes every effort to select capable, competent, and reliable suppliers for all the material, equipment and services we purchase and/or offer our customers. Our selection evaluation processes are intended to ensure that our suppliers can meet the requirements both initially and on a continuing basis. We do this through various programs designed to meet the needs of various Verizon organizations. Some of the major programs include the following:

- **Best of Breed Partners Program:** Avaya has participated in the Verizon Best of Breed Partners program for more than a year.
- **Network Operations Evaluation and Testing:** extensive evaluation and testing of the equipment that will be placed into our network to ensure network interoperability and compatibility.
- **CPE Certification Process:** determines interoperability and compatibility of network CPE with the Verizon network through Verizon's Enterprise LAN Laboratory in Tulsa, OK.
- **Vendor Alliance Program:** seeks out and forms alliances with industry-leading companies to offer our customers products and services that complement those of Verizon. For example:
  - E-commerce
  - Internet, intranet, and Extranet design
  - Network integration and deployment
  - Network and document security
  - Network readiness assessment
  - Enterprise resource planning solutions
  - Application solution and development services
  - Technology consulting
  - Hardware and software
  - Data warehousing/data mining.

## Network Operations

Within our Network Operations organization, a quality program has been implemented using the "Customer Focused Management" or CFM label. A short summary follows:

- CFM was rolled out to the entire Network Operations organization in 1994.
- To date, over 4000 people have been trained in CFM awareness, process management, facilitation skills, Statistical Process Control, ISO 9000 awareness and other tools.



- The operations business has been divided into four core processes: Delivery, Assurance, Transmission and Network Performance.
- Each of the processes has an executive sponsor and at least one cross-functional team in place to define measure and improve. Due to the scope of some of the processes, there are multiple teams in some areas. Alignment and replication of best practices across the 4000+ people within Network Operations are facilitated through the focus on these core business processes.

## Awards and Recognition

Verizon Business and its predecessor companies have received numerous prestigious awards for technological innovation, dependable service delivery, product value, and unsurpassed customer care.

- **21 October, 2008.** [Verizon Business Recognized as a Leader in Domestic North American Managed MPLS Services](#)
- **21 October, 2008.** [Leading Market Research Firm Ranks Verizon Business as a 'Leader' Among U.S.-Based Enterprise Providers](#)
- **23 September, 2008.** [Verizon Business's Global IP Network Ranks No. 1 as Most Connected Public Internet Network, for the Tenth Consecutive Year.](#)
- **31 July, 2008.** [Verizon Business Receives Top Honors From Frost & Sullivan for VoIP Services.](#)
- **21 July, 2008.** [Verizon Business Receives Prestigious British Standards Institution Designation for Information Security Management.](#)
- **17 July, 2008.** [Frost & Sullivan Honors Verizon Business With 2008 North American Market Leadership Award for Hosted Contact Center Services](#)
- **01 July, 2008.** [Verizon Business Recognized For Outstanding VoIP Innovation.](#)
- **25 June, 2008.** [Verizon Business Receives Prestigious British Standards Institution Designation for Business Continuity Solutions.](#)
- **23 June, 2008.** [Metro Ethernet Forum Recognizes Verizon's Carrier Ethernet Leadership for Third Consecutive Year.](#)
- **20 May, 2008.** [Leading Analyst Firm Positions Verizon Business in Leaders Quadrant for North American Managed and Professional Network Service Providers.](#)
- **09 May, 2008.** [Verizon Business Earns 'Cisco 2007 U.S. Partner Provider of the Year Award', and Other Top Awards for the US and Canada.](#)
- **15 April, 2008.** [Verizon Business Recognized by Nemertes Research for Ethernet and MPLS Leadership.](#)
- **07 April, 2008.** [Leading Analyst Firm Names Verizon Business to Leaders Quadrant for U.S. Network Service Providers.](#)

## Client References

*The Offeror will list three (3) to five (5) of its clients where similar services are provided. The Offeror is encouraged to include clients having similar scope of services, geographies, industry, and scale as the Commonwealth.*

*The Offeror will include a client contact name, title, address, email address and phone number for each of the references provided. The Offeror will provide a brief description of the services provided for each client. The Offeror will also ensure that the Commonwealth is able to discuss with the client or clients listed, the client's experience with the Offeror's services.*

### Verizon Business Response

- Verizon Business submits the following references as a testament to our ability to deliver complex solutions to large enterprise customers.

Client Organization Name	Contact	Services Provided
United States Postal Service	Name: Larry Wills Phone : 919-501-9500 Email: lwills@usps.gov	Network Management Professional Services Managed Services
State of West Virginia	Name: John Dunlap Title: Director of Telecommunications One Davis Sq Charleston, WV 25301 Phone : 304-558-8145 Email: john.d.dunlap@wv.gov	Private IP Ethernet Services Traditional Hi-Cap Hosted IP CENTREX /IP Trunking Frame Relay Managed Services Satellite
U S Navy	Name: Randall Richmond Phone :703-284-4676 Email: <a href="mailto:randall.richmond@verizonbusiness.com">randall.richmond@verizonbusiness.com</a> ***Due to the secure nature of the US Navy IT environment, contact must be coordinated through Mr. Randall Richmond of Verizon Network Services to the Navy	Multiple On-site Network Operations Centers

<b>Client Organization Name</b>	<b>Contact</b>	<b>Services Provided</b>
Social Security Administration	Name: Pam Copenhaver Title: Program Director 6201 Security Blvd Baltimore, MD 21235 Phone: 410-965-4558	Network Management Voice and Data VoIP Call Center Support International Private Line Services On-site NOC Video Conferencing Mobile and Fixed Satellite Services

## II-5. Objections and Additions to Standard Contract Terms and Conditions

*The Offeror will identify which, if any, of the terms and conditions (contained in Appendix A) it would like to negotiate and what additional terms and conditions the Offeror would like to add to the standard contract terms and conditions. The Offeror's failure to make a submission under this paragraph will result in its waiving its right to do so later, but the Issuing Office may consider late objections and requests for additions if to do so, in the Issuing Office's sole discretion, would be in the best interest of the Commonwealth. The Issuing Office may, in its sole discretion, accept or reject any requested changes to the standard contract terms and conditions. The Offeror shall not request changes to the other provisions of the RFP, nor shall the Offeror request to completely substitute its own terms and conditions for Appendix A. All terms and conditions must appear in one integrated contract. The Issuing Office will not accept references to the Offeror's, or any other, online guides or online terms and conditions contained in any proposal.*

*Regardless of any objections set out in its proposal, the Offeror must submit its proposal, including the cost proposal, on the basis of the terms and conditions set out in Appendix A. The Issuing Office will reject any proposal that is conditioned on the negotiation of the terms and conditions set out in Appendix A or to other provisions of the RFP as specifically identified above.*

### Verizon Business Response

In accordance with the terms of Parts I-IV of the RFP, section II-5 (Objections and Additions to Standard Contract Terms and Conditions), Verizon submits its proposal on the basis of the terms and conditions set out in Appendix A. Pursuant to the Commonwealth's instructions, Verizon has identified below the Standard Contract Terms and Conditions it would like to negotiate and has proposed additional language as appropriate.

Moreover, to supply missing terms and conditions, Verizon has included proposed additional contract terms and conditions consisting of Verizon's standard Service Attachments, and specific provisions from the Verizon tariffs and its Service Publication and Price Guide ("Guide") that are referenced in those Service Attachments. These supplemental terms are located in Appendix A1 located on the CD labeled Appendix A1 found in the Cost Submittal. Verizon recognizes and agrees that these supplemental terms are subject to the Contract's order of precedence. The rates and prices included in Verizon's proposal Exhibit D-Offeror Pricing Forms and the Rate Tables, supersede any rate or price included in Appendix A-1 which should be disregarded.

Verizon expects to conform all additional terms to the appropriate documents after award and once negotiations are concluded. Verizon further expects that some of the additional terms which may apply to particular services may be more

appropriately included as part of Schedule B (Services and Statements of Work), which remains to be developed by the parties.

Section 1 (g): Authorized representatives of Commonwealth, Commonwealth agents and agents of the Federal government shall be permitted access to any Contractor Services Location.

### Verizon Business Response

Verizon proposes adding the following: Contractor will provide access with reasonable prior notice and otherwise in accordance with applicable law.

***Section 3: If the Contractor must perform work at a Commonwealth facility outside of the daily operational hours set forth by the Commonwealth, it must make arrangements with the Commonwealth to assure access to the facility and equipment. No additional payment will be made on the basis of lack of access, unless the Commonwealth fails to provide access as set out in the RFP.***

### Verizon Business Response

Verizon proposes adding the following: The Commonwealth shall provide for emergency access and shall allow for reasonable access for working outside the daily operational hours.

***Section 6(a): This Contract, including the Contract signature pages, together with the Contractor's Proposal and Best and Final Offer, if any, and the RFP and addenda thereto, if any, that are incorporated herein by reference, constitutes the final, complete, and exclusive Contract between the parties containing all the terms and conditions agreed to by the parties.***

### Verizon Business Response

Verizon proposes that the Contract consist only of the terms and conditions (Appendix A as amended). Section 5(a) permits resort to the Contractor's proposal (and by extension, BAFO) in the event of an ambiguity. Verizon proposes to eliminate this subparagraph (a).

***Section 9: The Contractor may subcontract any portion of the Services described in this Contract to third parties selected by Contractor and approved in writing by the Commonwealth, whose approval shall not be unreasonably withheld and who shall be listed at Schedule I (Approved Subcontractors). Notwithstanding the above, if Contractor has disclosed the identity of Subcontractor(s) together with the scope of work to be subcontracted in the Contractor's Proposal, award of the Contract is deemed approval of all named Subcontractors for the specified scope of work and a separate approval is not required. The existence of any subcontract shall not change the obligations of Contractor to the Commonwealth under this Contract. Upon request of the Commonwealth, the Contractor must provide the Commonwealth with a copy of the subcontract agreement between the Contractor and the subcontractor. The Commonwealth reserves the right, for good cause, to require that the Contractor remove a subcontractor from the project. The Commonwealth will not be responsible***

*for any costs incurred by the Contractor in replacing the subcontractor if good cause exists.*

## Verizon Business Response

Verizon proposes to eliminate this provision. As the Contractor, Verizon is responsible for providing the Services in accordance with the requirements of the Contract. If Verizon does not perform, or it is otherwise deficient in its obligations, the Commonwealth can hold it in default. Verizon will be responsible for managing its subcontractors accordingly. In any event Verizon proposes that the Commonwealth's right to terminate a subcontractor shall be limited to material breaches of the Contract.

Moreover, if the Commonwealth requires Verizon to remove a subcontractor, Verizon should be relieved of its service level requirements for the service adversely impacted by the removal of the subcontractor until a replacement is found. Verizon's contracts with subcontractors are confidential, however, upon request, Verizon will provide redacted subcontractor agreements. Verizon also proposes to add the following language:

"Notwithstanding the foregoing, in the event the Commonwealth requires Contractor to remove a subcontractor, Contractor will be excused from compliance with the requirements of Section 24 (Service Levels) and the failure of Contractor to provide the services that were being provided by the removed subcontractor shall not constitute a default by Contractor under Section 20 (Default)."

***Section 10 (a): The Commonwealth may undertake or award other contracts for additional or related work, and the Contractor shall fully cooperate with other contractors and Commonwealth employees, and coordinate its work with such additional work as may be required. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Commonwealth employees. This paragraph shall be included in the Contracts of all contractors with which this Contractor will be required to cooperate. The Commonwealth shall equitably enforce this paragraph as to all contractors to prevent the imposition of unreasonable burdens on any contractor.***

## Verizon Business Response

Verizon proposes to modify the provision as follows:

The Commonwealth may undertake or award other contracts for additional or related work, and the Contractor shall fully cooperate, to the extent reasonable and practical and provided that such cooperation does not require Contractor to incur any additional costs, with other contractors and Commonwealth employees, and coordinate its work with such additional work as may be required. ~~The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Commonwealth employees.~~ This paragraph shall be included in the Contracts of all contractors with which this Contractor will be required to cooperate. The Commonwealth shall equitably enforce this paragraph as to all contractors to prevent the imposition of unreasonable burdens on any contractor.

***Section 13: (a) The Commonwealth shall put forth reasonable efforts to make payment by the required payment date. The required payment date is:***

***(1) The date on which payment is due under the terms of the Contract; or***

***(2) Thirty (30) calendar days after a proper invoice actually is received at the “Bill To” address if a date on which payment is due is not specified in the Contract (a “proper” invoice is not received until the Commonwealth accepts the Service as satisfactorily performed).***

***The payment date shall be the date specified on the invoice if later than the dates established by (1) and (2) above.***

***(b) Payment may be delayed if the payment amount on an invoice is not based upon the price(s) as stated in the Contract, if any payment is not made within fifteen (15) days after the required payment date, the Commonwealth may pay interest as determined by the Secretary of Budget in accordance with Act No. 266 of 1982 and regulations promulgated pursuant thereto. Payment should not be construed by the Contractor as acceptance of the Service performed by the Contractor. The Commonwealth reserves the right to conduct further testing and inspection after payment, but within a reasonable time after performance, and to reject the Service if such post payment testing or inspection discloses a defect or a failure to meet specifications.***

***(c) Contractor shall continue to provide the Services even in the event payment is delayed or is not made in timely fashion.***

***(d) All charges shall be exclusive of any taxes and fees and shall be supported by a line-item detailed analysis of the charges, showing how the charges are authorized under the Contract, and providing details of any allocation, algorithm or other calculation that was used to derive the charges, and providing sufficient detail that Commonwealth will be able to (i) reconcile the charges to the contractual commitments that give rise to them, and (ii) operate its internal cross charging protocols to re-charge the amounts billed by Contractor to the applicable business units.***

## **Verizon Business Response**

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Verizon proposes that payments as to non-disputed charges shall be made within the timeframes outlined in the contract, and that Verizon must have the ability to terminate for non-payment. Thus, Verizon proposes the following changes to the contract:

Change first sentence of subsection (a) to read: “The Commonwealth shall pay all non-disputed charges by the required payment date.”

Change sub-subsection (2) of subsection (a) to read: “(2) Thirty (30) calendar days after an invoice actually is received at the “Bill To” address if a date on which payment is due is not specified in the Contract.”



Change subsection (b) to read: "Payment may be delayed for disputed charges until resolution of such dispute. If any payment is not made within fifteen (15) days after the required payment date for non-disputed charges, the Commonwealth shall pay interest as determined by the Secretary of Budget in accordance with Act No. 266 of 1982 and regulations promulgated pursuant thereto."

Change subsection (c) to read: "Contractor shall continue to provide the Services even in the event payment is delayed or is not made in timely fashion, provided, however, that Contractor shall be entitled to terminate delivery of a service in the event that (1) the Commonwealth fails to remit payment for an invoice rendered in accordance with the Contract; (2) the Commonwealth does not dispute either the amount of the charges invoiced by Contractor or the Commonwealth's obligation to pay the charges on the invoice; and (3) Contractor and the Commonwealth have exhausted the dispute resolution procedures of this Contract."

### **15. ASSIGNABILITY**

***(a) Subject to the terms and conditions of this Article 15 (ASSIGNABILITY), the Contract is binding upon the parties and their respective successors and assigns.***

***(b) The Contractor may not assign, in whole or in part, the Contract or its rights, duties, obligations, or responsibilities hereunder without the prior written consent of the Commonwealth, which consent may be withheld at the sole and absolute discretion of the Commonwealth.***

***(c) For the purposes of the Contract, the term "assign" shall include, but shall not be limited to, the sale, gift, assignment, encumbrance, pledge, or other transfer of any ownership interest in the Contractor provided, however, that the term shall not apply to the sale or other transfer of stock of a publicly traded company.***

***(d) Any assignment consented to by the Commonwealth shall be evidenced by a written assignment agreement executed by the Contractor and its assignee in which the assignee agrees to be legally bound by all of the terms and conditions of the Contract and to assume the duties, obligations, and responsibilities being assigned.***

***(e) Notwithstanding the foregoing, the Contractor may, without the consent of the Commonwealth, assign its rights to payment to be received under the Contract, provided that the Contractor provides written notice of such assignment to the Commonwealth together with a written acknowledgement from the assignee that any such payments are subject to all of the terms and conditions of the Contract.***

***(f) A change of name by the Contractor, following which the Contractor's federal identification number remains unchanged, is not considered to be an assignment. The Contractor shall give the Commonwealth written notice of any such change of name.***

## **Verizon Business Response**

Verizon must be able to assign the Agreement and its right to payment to affiliates or successors without the Commonwealth's consent. Verizon proposes to replace this provision with the following:

Contractor may not assign this Agreement or any of its rights hereunder without consent, except Contractor may assign this Agreement to an affiliate or successor

upon prior notice to the Commonwealth. A Commonwealth assignee must meet Contractor's creditworthiness standards for the assignment to become effective. All other assignments without prior written consent are void.

***Section 16: (a) In the event that Contractor is failing to deliver all or part of the Services, Commonwealth may assign Commonwealth staff or third parties to step in and perform any failing elements of the Services until such time as Contractor can demonstrate the ability to resume provision of such Services.***

***(b) All costs associated with the exercise of such step-in rights shall be borne by Contractor.***

***(c) Commonwealth's exercise of its step-in rights shall not constitute a waiver by Commonwealth of any termination rights or rights to pursue a claim for damages arising out of the failure that led to the step-in rights being exercised.***

## Verizon Business Response

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Verizon proposes modifying this provision so as to conform it to the terms of the Default clause, section 20, as follows:

(a) In the event that Contractor is failing to deliver all or part of the Services, and after notice and failure to cure pursuant to section 20, Commonwealth may assign Commonwealth staff or third parties to step in and perform any failing elements of the Services until such time as Contractor can demonstrate the ability to resume provision of such Services.

(b) All costs associated with the exercise of such step-in rights shall be borne by Contractor.

(c) Commonwealth's exercise of its step-in rights shall not constitute a waiver by Commonwealth of any termination rights or rights to pursue a claim for damages arising out of the failure that led to the step-in rights being exercised.

***Section 19: (a) Acceptance of Services will occur in accordance with the Acceptance Testing Plan submitted by the Contactor and approved by the Commonwealth. Upon approval of the plan by the Commonwealth, the Acceptance Testing Plan becomes part of this Contract. The Acceptance Testing Plan will provide for a Final Acceptance Test, and may provide for Milestone acceptance tests. Each Acceptance Test will be designed to demonstrate that the Services conform with the relevant functional specification, if any, and/or the requirements of this Contract. Contractor shall notify the Commonwealth when the deliverable is completed and ready for acceptance testing. The Commonwealth will not unreasonably delay commencement of acceptance testing.***

***(b) Contractor shall certify, in writing, to the Commonwealth when a particular Deliverable is completed and ready for acceptance (hereinafter Acceptance). Unless otherwise agreed to by the Commonwealth, the Acceptance period shall be ten (10) business days for Transition and Transformation Milestones and thirty (30) days for Critical Milestones and the Final Acceptance Test. On or before the 10<sup>th</sup> business day for Transition and Transformation Milestones, or 30<sup>th</sup> business day for Critical Milestones and the Final Acceptance Test, following receipt by the Commonwealth of Contractor's certification of completion of a particular milestone, the Commonwealth***

*shall either: (1) provide the Contractor with Commonwealth's written conditional acceptance of the Deliverable, subject to satisfactory completion of the Final Acceptance Test or (2) identify to Contractor, in writing, the failure of the Services to comply with the specifications, listing all such errors and omissions with reasonable detail.*

*(c) If the Services are in compliance with the specifications, then the Commonwealth shall provide the Contractor with Commonwealth's written conditional acceptance of the Deliverable. If the Deliverable is not in compliance with the specifications, then the Commonwealth shall provide the Contractor with Commonwealth's written rejection of the Deliverable. Payment will only be made if the Commonwealth has accepted the Deliverable through written acceptance.*

*(d) If the Deliverables do not meet an accessibility standard, the Contractor must provide written justification for its failure to meet the standard. The justification must provide specific details as to why the standard has not been met. The Commonwealth may either waive the requirement as not applicable to the Commonwealth's business requirements or require that the Contractor provide an acceptable alternative. Any Commonwealth waiver of the requirement must be in writing.*

*(e) Upon the Contractor's receipt of the Commonwealth's written notice of rejection, which must identify the reasons for the failure of the Deliverable to comply with the specifications, the Contractor shall have fifteen (15) business days, or such other time as the Commonwealth and Contractor may agree is reasonable, within which to correct all such failures, and resubmit the corrected Deliverable, certifying to the Commonwealth, in writing, that the failures have been corrected, and that the Deliverable has been brought into compliance with the specifications. Upon receipt of such corrected and resubmitted Deliverable and certification, the Commonwealth shall have thirty (30) business days to test the corrected Deliverable to confirm that it is in compliance with the specifications. If the corrected Deliverable is in compliance with the specifications, then the Commonwealth shall provide the Contractor with Commonwealth's conditional acceptance of the Deliverable in the completed milestone.*

*(f) If, in the opinion of the Commonwealth, the corrected Critical Milestone or Final Acceptance Test still contains material failures, the Commonwealth may either:*

*(1) Repeat the procedure set forth above; or*

*(2) Terminate the contract in accordance with Article 27 (TERMINATION).*

## **Verizon Business Response**

Verizon proposes substituting the following for Section 19 as it currently is set forth in the contract:

Section 19. Acceptance of Services will occur in accordance with the Acceptance Testing Plan submitted by the Contactor and approved by the Commonwealth. The Commonwealth shall pay for Deliverables in accordance with the terms of this Agreement once the Commonwealth accepts a circuit, equipment or other contract Deliverable under the Acceptance Testing Plan or otherwise places it in productive use.

(a) Acceptance of Services will occur in accordance. Upon approval of the plan by the Commonwealth, the Acceptance Testing Plan becomes part of this Contract. The Acceptance Testing Plan will provide for a Final Acceptance Test, and may provide for Milestone acceptance tests. Each Acceptance Test will be designed to demonstrate that the Services conform with the relevant functional specification, if any, and/or the requirements of this Contract. Contractor shall notify the Commonwealth when the deliverable is completed and ready for acceptance testing. The Commonwealth will not unreasonably delay commencement of acceptance testing.

(b) Contractor shall certify, in writing, to the Commonwealth when a particular Deliverable is completed and ready for acceptance (hereinafter Acceptance). Unless otherwise agreed to by the Commonwealth, the Acceptance period shall be ten (10) business days for Transition and Transformation Milestones and thirty (30) days for Critical Milestones and the Final Acceptance Test. On or before the 10th business day for Transition and Transformation Milestones, or 30th business day for Critical Milestones and the Final Acceptance Test, following receipt by the Commonwealth of Contractor's certification of completion of a particular milestone, the Commonwealth shall either: (1) provide the Contractor with Commonwealth's written conditional acceptance of the Deliverable, subject to satisfactory completion of the Final Acceptance Test or (2) identify to Contractor, in writing, the failure of the Services to comply with the specifications, listing all such errors and omissions with reasonable detail.

(c) If the Services are in compliance with the specifications, then the Commonwealth shall provide the Contractor with Commonwealth's written conditional acceptance of the Deliverable. If the Deliverable is not in compliance with the specifications, then the Commonwealth shall provide the Contractor with Commonwealth's written rejection of the Deliverable. Payment will only be made if the Commonwealth has accepted the Deliverable through written acceptance.

(d) If the Deliverables do not meet the relevant contract standard, the Contractor must provide written justification for its failure to meet the standard. The justification must provide specific details as to why the standard has not been met. The Commonwealth may either waive the requirement as not applicable to the Commonwealth's business requirements or require that the Contractor provide an acceptable alternative. Any Commonwealth waiver of the requirement must be in writing.

(e) Upon the Contractor's receipt of the Commonwealth's written notice of rejection, which must identify the reasons for the failure of the Deliverable to comply with the specifications, the Contractor shall have fifteen (15) business days, or such other time as the Commonwealth and Contractor may agree is reasonable, within which to correct all such failures, and resubmit the corrected Deliverable, certifying to the Commonwealth, in writing, that the failures have been corrected, and that the Deliverable has been brought into compliance with the specifications. Upon receipt of such corrected and resubmitted Deliverable and certification, the Commonwealth shall have thirty (30) business days to test the corrected Deliverable to confirm that it is in compliance with the specifications.

If the corrected Deliverable is in compliance with the specifications, then the Commonwealth shall provide the Contractor with Commonwealth's conditional acceptance of the Deliverable in the completed milestone.

(f) If, in the opinion of the Commonwealth, the corrected Critical Milestone or Final Acceptance Test still contains material failures, the Commonwealth may either:

- (1) Repeat the procedure set forth above; or
- (2) Terminate the contract in accordance with Article 27 (TERMINATION).

***Section 20 (a): The Commonwealth may, subject to the provisions of Article 21 (NOTICE OF DELAYS), and in addition to its other rights under the Contract, declare the Contractor in default by written notice thereof to the Contractor, and terminate (as provided in Article 27 (TERMINATION) the whole or any part of this Contract and shall further have the right to seek damages from Contractor for any of the following reasons:***

- (1) Failure to begin work within the time specified in the Contract or as otherwise specified;***
- (2) Failure to agree to final Transition and Transformation Plans;***
- (3) Failure to successfully complete a Transition Milestone or a Transformation Milestone in accordance with the agreed Transition or Transformation Plans or for causing a material disruption to Commonwealth's business during the Transition Period or Transformation Period as applicable, or to complete specified work in accordance with the Contract terms;***
- (4) Multiple failures over time of a single Service Level or a pattern of failure over time across multiple Service Levels (a Service Level Termination Event); this will include failures of Critical Service Levels and Key Service Levels;***
- (5) Failure to make adjustments to the fees or Service Levels in accordance with the outcome of a Benchmarking Report;***
- (6) Failure or refusal to remove material, or remove and replace any work rejected as defective or unsatisfactory;***
- (7) Abandonment or willful refusal to provide the Services or any part of the Services;***
- (8) Failure to resume delivery of Critical Services within the time periods prescribed in Schedule E (Critical Services). Regardless of any other provision in this Contract the contrary no cure period is available to Contractor should the Commonwealth terminate under this Section 20(a)(7);***
- (9) Failure to perform its responsibilities under any Business Continuity or Disaster Recovery Plans, including such Business Continuity or Disaster Recovery Plans that apply to Contractor's own locations used for the delivery of the Services;***
- (10) Failure to replenish any cap agreed with respect to liabilities in the event that agreed or claimed liabilities reach 75% of the cap value;***
- (11) Insolvency or bankruptcy;***
- (12) Assignment made for the benefit of creditors;***



***(13) Failure or refusal within 10 days after written notice by the Contracting Officer, of the Contractor to make payment or show cause why payment should not be made, of any amounts due for materials furnished, labor supplied or performed, for equipment rentals, or for utility services rendered;***

***(14) Failure to protect, to repair, or to make good any damage or injury to property;***

***(15) Breaches of covenants, agreements, obligations, representations or warranties in the Contract occurring simultaneously or over time, whether or not each such breach is a material breach, and whether or not each such breach was cured, that taken together constitute a material breach of the Contract after Contractor has been made aware of such breaches, on an individual basis. Regardless of any other provision in this Contract the contrary no cure period is available to Contractor should the Commonwealth terminate under this Section 20(a)(15);***

***(16) An act or omission of Contractor that results in any Regulatory Entity notifying Commonwealth that it is subjecting Commonwealth to a hearing or tribunal or withdrawing any license granted to Commonwealth or Contractor and such hearing, tribunal or withdrawal would have a material and adverse effect on Commonwealth's operations or business or the Services. Regardless of any other provision in this Contract the contrary no cure period is available to Contractor should the Commonwealth terminate under this Section 20(a)(16);***

***(17) A material increase in fees or reduction in the benefits received by the Commonwealth resulting from a change(s) to the regulatory environment or structure. Regardless of any other provision in this Contract the contrary no cure period is available to Contractor should the Commonwealth terminate under this Section 20(a)(17).***

## Verizon Business Response

This provision needs to be limited to material breaches of the Contract be limited to material breaches after an opportunity to cure. Verizon proposes the following language to replace this provision:

“Either party may, upon written notice, immediately suspend its performance of and/or terminate the affected service or equipment order to which the deficiency pertains in the event the other party (i) fails to perform material terms of this Agreement and (a) such failure is not cured within thirty (30) calendar days following receipt of a default notice in writing from the other party, or (b) if such failure cannot reasonably be cured during that time and the defaulting party fails to use commercially reasonable efforts to cure such breach as soon as practicable, but in any event within ninety (90) calendar days following written notice; (ii) engages in fraud, criminal conduct or willful misconduct in connection with the business relationship of the parties; or (iii) becomes insolvent, ceases doing business in the ordinary course, enters bankruptcy proceedings or effects an assignment for the benefit of creditors. In the event Verizon terminates this Agreement pursuant to this Section, the Commonwealth shall promptly pay Contractor for the System and any services provided up to the date of termination. In the event the Commonwealth defaults under this Agreement, the Commonwealth's down payment, if any, shall be non-refundable.”

Also, any damages that may result from any default shall be limited to the amount paid by the Commonwealth to Verizon under the Contract for the six month period prior accrual of the most recent cause of action.

***Section 20 (b): In the event that the Commonwealth terminates this Contract in whole or in part as provided in SubSection (a) above, the Commonwealth may procure, upon such terms and in such manner as it determines, services similar or identical to those so terminated, and the Contractor shall be liable to the Commonwealth for any reasonable excess costs for such similar or identical services included within the terminated part of the Contract.***

### Verizon Business Response

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Same as 20 (a).

***Section 22: (a) Following execution of the Contract, Contractor shall proceed diligently with all Services and shall perform such Services with qualified personnel, in accordance with the completion criteria set forth in the Contract.***

***(b) In determining whether or not the Contractor has performed with due diligence hereunder, it is agreed and understood that the Commonwealth may measure the amount and quality of the Contractor's effort against the representations made in the Contractor's Proposal. The Contractor's Services hereunder shall be monitored by the Commonwealth and the Commonwealth's designated representatives. If the Commonwealth reasonably determines that the Contractor has not performed with due diligence, the Commonwealth and the Contractor will attempt to reach agreement with respect to such matter. Failure of the Commonwealth or the Contractor to arrive at such mutual determinations shall be a dispute concerning a question of fact within the meaning of Article 30 (CONTRACT CONTROVERSIES) of this Contract.***

### Verizon Business Response

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Verizon proposes that the Contract specifications (including the schedules, appendices, and exhibits shall spell out the specific responsibilities of both parties, and the standards by which each party's performance shall be measured.

***Section 23 (c): Contractor acknowledges that certain of the Contractor employees and subcontractors are critical to the provision of the Services hereunder ("Key Positions"). With respect to Key Positions, the Parties agree as follows:***

***(1) Each individual in a Key Position shall be dedicated to the Commonwealth account in accordance with the requirements set out in Schedule L (Key Positions);***

***(2) Before assigning an individual to a Key Position, whether as an initial assignment or as a replacement, Contractor shall:***

***(i) Notify Commonwealth of the proposed assignment;***

***(ii) Introduce the individual to appropriate representatives of Commonwealth;***

***(iii) Provide Commonwealth with a resume and any other information regarding the individual that may be reasonably requested by Commonwealth;***

***(iv) Allow Commonwealth to interview the individual; and***



*(v) Obtain Commonwealth's approval for such assignment.*

*Contractor shall only assign an individual to a Key Position who is mutually agreed upon by Commonwealth and Contractor; Contractor retains exclusive direction and control as to hiring, termination, and right to discipline or reward such individuals in connection with their employment;*

*(3) Contractor shall not replace or reassign individuals in Key Positions (except as a result of voluntary resignation, involuntary termination for cause, serious illness, disability or death) for the applicable time period set out in Schedule L (Key Positions) following the date of his or her assignment to the Commonwealth account unless Commonwealth consents in writing to such reassignment or replacement or such individual in such Key Position;*

*(4) If Commonwealth decides that any individual in a Key Position should not continue in that position, then Commonwealth may, in its sole discretion and upon notice to Contractor, require removal of such individual in the Key Position from the Contractor Personnel in accordance with the following:*

*(i) Contractor shall, as soon as reasonably practicable, replace such individual in the Key Position with another person of suitable ability and qualifications in accordance with procedures set forth above; and*

*(ii) In the event that an individual in a Key Position is suspected of criminal conduct or breach of Contractor's obligations, Contractor shall immediately remove and replace such individual with another person of suitable ability and qualifications in accordance with the procedures set forth above. .*

*(5) Contractor shall not without Commonwealth consent replace or reassign greater than twenty percent (20%) of individuals in Key Positions in any rolling six (6) month period.*

## Verizon Business Response

Verizon proposes the following changes: This provision should specify that the Commonwealth cannot unreasonably withhold its approval or written consent. Moreover, suspicion of criminal conduct as reason for removal is too ambiguous a standard and should be deleted. Verizon also proposes the following:

Change to: 23 (c)(2)(v) "Obtain Commonwealth's approval for such assignment, such approval not to be unreasonably withheld."

Change to: 23 (c)(3) "... consents in writing to such reassignment or replacement of such individual in such Key Position, such written consent not to be unreasonably withheld."

Change to 23 (c) (4)(ii) delete as redundant of section 23 (c)(4).

***Section 23 (e): It is the express intent of the Parties that all Contractor Personnel will be at all times exclusively employees of the Contractor or a Subcontractor authorized under this Contract. The Contractor will at all times ensure that no employment, labor or agency relationship is established between any Contractor Personnel and Commonwealth. Nothing in this Contract will in any way be construed to provide that***

***Contractor Personnel are agents, employees or representatives of Commonwealth, and personnel designated by the Contractor hereunder shall be treated, at all times, as under the authority, direction, supervision and control of the Contractor. Contractor shall cause Contractor Personnel to comply at all times with all applicable Commonwealth policies and procedures.***

## Verizon Business Response

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Verizon can only make commercially reasonable efforts to guard against the Commonwealth being deemed a joint or co-employer. Verizon cannot agree to “ensure” that a court will not deem the Commonwealth to be a joint or co-employer. Verizon proposes to modify this provision as follows:

It is the express intent of the Parties that all Contractor Personnel will be at all times exclusively employees of the Contractor or a Subcontractor authorized under this Contract. The Contractor and the Commonwealth will at all times work cooperatively to ensure that no employment, labor or agency relationship is established between any Contractor Personnel and Commonwealth. Nothing in this Contract will in any way be construed to provide that Contractor Personnel are agents, employees or representatives of Commonwealth, and personnel designated by the Contractor hereunder shall be treated, at all times, as under the authority, direction, supervision and control of the Contractor. Contractor shall cause Contractor Personnel to comply at all times with all applicable Commonwealth policies and procedures.

**Section 23 (g): Contractor shall:**

***(1) Enter into, or shall have entered into, a non disclosure agreement with each Contractor Personnel prior to assigning such employee to the Commonwealth account, and cause each Contractor Personnel to maintain and enforce the confidentiality provisions of the Contract both during and after their assignment to the Commonwealth account; and***

***(2) Enter into, or shall have entered into, an agreement with each Contractor Personnel which assigns, transfers and conveys to Contractor all of such employee’s right, title and interest in and to any materials created pursuant to the Contract, including all rights of patent, copyright, trade secret or other proprietary rights in and to such materials.***

## Verizon Business Response

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Verizon clarifies that it will use its own non-disclosure agreement.

**Section 24: (a) The Contractor shall comply with the procedures and requirements of Schedule F (Service Level Methodology) during the term of the Contract and through the Expiration Date.**

***(b) All Services without expressly defined Service Levels must be performed at least to the same degree of accuracy, completeness, efficiency, quality and timeliness as is provided by well-managed suppliers providing services similar to the Services. Contractor will measure and report its performance against these standards on at least a monthly basis, except as may otherwise be agreed between the Parties in respect of Services performed less frequently than monthly.***

***(c) The Commonwealth's acceptance of any Service Level Credit shall not bar or impair Commonwealth's rights and remedies in respect of the failure or root cause as set forth elsewhere in this Contract, including without limitation claims for liquidated damages, injunctive relief and termination rights, provided however, Service level Credits paid would be credited against any such claim for damages.***

## **Verizon Business Response**

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Verizon passes through any warranties given by its suppliers. Verizon does not offer or guarantee levels of service for CPE.

Verizon proposes to use its standard SLAs for Services where SLAs are available. These SLAs are provided at no additional cost. Moreover, Verizon proposes to discuss with the Commonwealth the need for any custom SLAs required in to meet the Commonwealth's critical business needs. Verizon expects that the commonwealth and the Commonwealth will mutually agree upon performance requirements for custom SLA on the products/services being proposed and any applicable price increase. Verizon expects that all SLA's will become effective upon the completion of the Transition.

***Section 25: (a) Contractor shall, on a continuous basis, (i) as part of its total quality management process, identify ways to improve the quality of the Services, and (ii) without violating its non disclosure obligations owed to a third party or a third party's proprietary rights, identify and apply proven techniques and tools from other installations within its operations that would benefit Commonwealth either operationally or financially.***

***(b) Generally, Contractor will commit to continuously and incrementally improving its performance of the Services provided under the Contract consistent with developments in the market for Services similar in scope, scale and geographic coverage.***

***(c) Commencing 24 months after the Effective Date, Contractor will undertake annual reviews of the Services, their associated charges and the underlying technology used to deliver the Services and bring to the Commonwealth the Contractor's plan to improve performance and reduce charges in accordance with Schedule O (Benchmarking Procedures). In the event Commonwealth and Contractor do not agree to a plan for improved performance or reduction in charges, then Commonwealth will have the right, at its expense, to use a third party to benchmark the Contractor's performance of and charges for any element of the Services, selecting such a benchmarker from a list of benchmarkers mutually approved by Commonwealth and Contractor and attached to the contract.***

***(d) Contractor shall automatically adjust the charges for benchmarked Services in accordance with the results of a benchmark to bring them back within the first quartile of the market range, considered from the perspective of Commonwealth's benefit, for the provision of Services similar in scope and performance requirements to the benchmarked Services within 30 days of the completion of the benchmark.***

*(e) Contractor may dispute the outcome of a benchmark, and in the event that after exhaustion of the governance and dispute resolution processes Commonwealth and Contractor are unable to agree on adjustments to the performance of and charges for the Services following a benchmarking exercise, Commonwealth shall have the right to terminate the Contract or a part of the Contract without penalty or payment to Contractor.*

## Verizon Business Response

Verizon proposes to modify this provision as follows in order to conform section (c) to the obligation set forth in section 25(a) and to clarify that any revised rates will be covered by a contract amendment.

Section 25: (a) Contractor shall, on a continuous basis, (i) as part of its total quality management process, identify ways to improve the quality of the Services, and (ii) without violating its non disclosure obligations owed to a third party or a third party's proprietary rights, identify and apply proven techniques and tools from other installations within its operations that would benefit Commonwealth either operationally or financially.

(b) Generally, Contractor will commit to continuously and incrementally improving its performance of the Services provided under the Contract consistent with developments in the market for Services similar in scope, scale and geographic coverage.

(c) Commencing 24 months after the Effective Date, Contractor will undertake annual reviews of the Services, their associated charges and the underlying technology used to deliver the Services and bring to the Commonwealth the Contractor's plan to improve performance and reduce charges in accordance with Schedule O (Benchmarking Procedures). In the event Commonwealth and Contractor do not agree to a plan for improved performance or reduction in charges, then Commonwealth will have the right, at its expense, to use a third party to benchmark the Contractor's performance of and charges for any element of the Services, selecting such a benchmarker from a list of benchmarkers mutually approved by Commonwealth and Contractor and attached to the contract.

(d) Contractor ~~shall automatically~~ and the Commonwealth will promptly amend the contract to reflect an adjustment of the charges for benchmarked Services in accordance with the results of a benchmark to bring them back within the first quartile of the market range, considered from the perspective of Commonwealth's benefit, for the provision of Services similar in scope, scale and geographic coverage and performance requirements to the benchmarked Services within 30 days of the completion of the benchmark.

(e) Contractor may dispute the outcome of a benchmark, and in the event that after exhaustion of the governance and dispute resolution processes Commonwealth and Contractor are unable to agree on adjustments to the performance of and charges for the Services following a benchmarking exercise, Commonwealth shall have the right to terminate the Contract or a part of the Contract in accordance with Section 27, Default without penalty or payment to Contractor except as otherwise provided under the terms of this Agreement.

***Section 27 (a): The Commonwealth may terminate this Contract without cause by giving Contractor thirty (30) calendar days prior written notice (Notice of Termination) whenever the Commonwealth shall determine that such termination is in the best interest of the Commonwealth (Termination for Convenience). Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance under this Contract is terminated either in whole or in part and the date on which such termination becomes effective. The Contractor shall cease work as of the date set forth in the Notice of Termination, and shall be paid only for such Services as have already been satisfactorily rendered up to and including the cease work date set forth in said notice, and as may be otherwise provided for in Schedule H (Termination Fees).***

### **Verizon Business Response**

Verizon proposes to modify the last sentence in this provision as follows:

The Contractor shall cease work as of the date set forth in the Notice of Termination, and shall be paid only for **work performed or costs incurred** up to and including the cease work date set forth in said notice, and as may be otherwise provided for in Schedule H (Termination Fees).

***Section 27(b): In the event of the sale by Contractor of all or substantially all of its assets (in a single transaction or a series of related transactions) or the sale of a controlling interest in Contractor's outstanding stock, Contractor shall be entitled to assign this Contract to its successor upon written notice thereof to Commonwealth. Commonwealth shall be entitled to receive from Contractor, upon Commonwealth's request, such information as is reasonably requested by Commonwealth to enable Commonwealth to assess the financial, technical and management capabilities of such successor to assume Contractor's obligations under this Contract. If Commonwealth determines, in the exercise of its reasonable discretion, that such successor does not or may not have such requisite financial, technical or management capabilities, and if Commonwealth informs Contractor thereof in writing and describing in reasonable detail its basis therefor, then, and only then, such assignment by Contractor shall be subject to Commonwealth's prior written consent, which consent may be withheld, delayed or conditioned in Commonwealth's sole discretion. If Commonwealth withholds such consent, then Commonwealth shall have the exclusive option of continuing under the terms and conditions of this Contract with Contractor or its successors or assigns for the full remaining term of this Contract, or continuing under the terms and conditions of this Contract with Contractor or its successors or assigns for such period of time as is necessary or desirable to terminate this Contract. Upon assignment, Contractor's successor or assigns will be required to execute a new contract with the Commonwealth containing terms and conditions identical to those set forth herein.***

### **Verizon Business Response**

Verizon proposes that this section be conformed and consolidated with Section 15 concerning assignment.



**Section 27 (b)[mislabeled]: (b) Non-Appropriation**

***Any payment obligation or portion thereof of the Commonwealth created by this Contract is conditioned upon the availability and appropriation of funds. When funds (state or federal) are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal year period, the Commonwealth shall have the right to terminate the Contract. The Contractor shall be reimbursed in the same manner as that described in this Section related to Termination for Convenience to the extent that appropriated funds are available.***

## **Verizon Business Response**

While Verizon understands the need for the Commonwealth to terminate due to lack of funds, Verizon does not feel that it would be equitable for termination to occur with a risk of not even having its costs covered due to a decision of the Commonwealth to not appropriate funds for the services for which Verizon incurred costs on behalf of the Commonwealth. Therefore, Verizon proposes to modify the last sentence in this provision to read as follows:

“The Contractor shall be reimbursed in the same manner for costs incurred up through the date of termination as that described in this Section related to Termination for Convenience. ~~to the extent that appropriated funds are available~~”

**Section 27 (c): Default**

***The Commonwealth may, in addition to its other rights under this Contract, terminate this Contract in whole or in part by providing written notice of default to the Contractor if the Contractor fails to perform any of its material obligations or breaches any material representations under this Contract, and such failure is not cured within 30 days after notice is given to Contractor specifying the nature of the default, or, if a cure within such period is not practical, commence a good faith effort to cure such failure to perform within the specified period (or such longer period as the Commonwealth may specify in writing) after receipt of written notice from the Commonwealth specifying such failure, or if the Contractor repeatedly fails to perform any material portion of its obligations or breaches any of its material representations under this Contract, regardless of whether such failures or breaches are cured . The Contracting Officer shall provide any notice of default or written cure notice for Contract terminations.***

***(1) Subject to Article 36 (LIMITATION OF LIABILITY) of this Contract, in the event the Commonwealth terminates this Contract in whole or in part as provided in this Section 27 (1), the Commonwealth may procure services similar to those so terminated, and the Contractor, in addition to liability for any liquidated damages, shall be liable to the Commonwealth, as the Commonwealth’s sole and exclusive remedy for such default, for the difference between the Contract price for the terminated portion of the Services and the actual and reasonable cost (but in no event greater than the fair market value) of producing substitute equivalent services for the terminated Services, provided that the Contractor shall continue the performance of this Contract to the extent not terminated under the provisions of this section.***

***(2) Except with respect to defaults of Subcontractors, the Contractor shall not be liable for any excess costs if the failure to perform the Contract arises out of causes beyond the control of the Contractor. Such causes may include, but are not limited to, acts of God or of the public enemy, fires, floods, epidemics, quarantine restrictions, strikes,***

*work stoppages, freight embargoes, acts of terrorism, and unusually severe weather. The Contractor shall notify the Contracting Officer immediately in writing of its inability to perform because of a cause beyond the control of the Contractor.*

*(3) Nothing in this Subsection 27 (c) shall abridge the Commonwealth's right to suspend, debar, or take other administrative action against the Contractor.*

*(4) If it is later determined that the Commonwealth erred in terminating the Contract for default, then the Contract shall be deemed to have been terminated for convenience under Section 27(a).*

*(5) If this Contract is terminated as provided by this Subsection 22(c), the Commonwealth may, in addition to any other rights provided in this Subsection, and subject to Article 48 (OWNERSHIP RIGHTS) of this Contract, require the Contractor to deliver to the Commonwealth in the manner and to the extent directed by the Contracting Officer, such reports and other documentation as the Contractor has specifically produced or specifically acquired for the performance of such part of the Contract as has been terminated. Payment for such reports and documentation will be made consistent with the Contract.*

## Verizon Business Response

Verizon proposes to modify this provision as follows:

(1) The Commonwealth may, in addition to its other rights under this Contract, terminate this Contract in whole or in part by providing written notice of default to the Contractor if the Contractor fails to perform any of its material obligations or breaches any material representations under this Contract, and such failure is not cured within 30 days after notice is given to Contractor specifying the nature of the default, or, if a cure within such period is not practical, commence a good faith effort to cure such failure to perform within the specified period (or such longer period as the Commonwealth may specify in writing) after receipt of written notice from the Commonwealth specifying such failure, or if the Contractor repeatedly fails to perform any material portion of its obligations or breaches any of its material representations under this Contract ~~regardless of whether such breaches are cured.~~ The Contracting Officer shall provide any notice of default or written cure notice for Contract terminations. Verizon may terminate this Agreement on thirty (30) days prior written notice if the State fails to pay undisputed charges for services provided if such failure is not promptly cured.

~~(2) Except with respect to defaults of Subcontractors, T~~he Contractor shall not be liable for any excess costs if the failure to perform the Contract arises out of causes beyond the control of the Contractor. Such causes may include, but are not limited to, acts of God or of the public enemy, fires, floods, epidemics, quarantine restrictions, strikes, work stoppages, freight embargoes, acts of terrorism, and unusually severe weather. The Contractor shall notify the Contracting Officer immediately in writing of its inability to perform because of a cause beyond the control of the Contractor.

(4) If it is later determined that the Commonwealth erred in terminating the Contract for default, then the Contract shall be deemed to have been terminated for convenience under Section 27(a).



(5) If this Contract is terminated as provided by this Subsection 272 (c), the Commonwealth may, in addition to any other rights provided in this Subsection, and subject to Article 48 (OWNERSHIP RIGHTS) of this Contract, require the Contractor to deliver to the Commonwealth in the manner and to the extent directed by the Contracting Officer, such reports and other documentation as the Contractor has specifically produced or specifically acquired for the performance of such part of the Contract as has been terminated. Payment for such reports and documentation will be made consistent with the Contract.

**Section 27 (d)(1) and (d)(2): Termination Fees**

***(1) In the event of termination other than for non-appropriation, Contractor shall receive the applicable termination fee as set out in Schedule H (Termination Fees).***

***(2) In no event shall the Contractor be paid for any loss of anticipated profit (by the Contractor or any Subcontractor), loss of use of money, or administrative or overhead costs.***

### **Verizon Business Response**

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Verizon shall be paid for all Services provided up to the date of termination in addition to termination fees included in Exhibit D.

***Section 28: (a) Commonwealth shall have the right to receive Termination Assistance Services from Contractor upon request after notification of termination, and such Termination Assistance Services for a period of up to 24 months (the "Termination Assistance Period"), which services shall provide all assistance reasonably necessary to ensure the continuation of the affected Services and their performance in accordance with the Service Levels and the successful transfer of the affected Services to Commonwealth or to any new Contractor selected by Commonwealth. Such Termination Assistance Services shall first be rendered using resources already working on Commonwealth's account and included within the fees, provided that the use of such resources shall not adversely impact Contractor's adherence to Service Levels; then by resources already working on Commonwealth's account and included within the fees, to the extent that Commonwealth permits Service Levels to be relaxed; and finally, using additional resources at costs determined by a rate card attached to the contract.***

***(b) At the end of a Termination Assistance Period the provisions of Schedule Q (Exit Rights) shall apply.***

### **Verizon Business Response**

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Verizon proposes that additional resources shall be charged on a time and materials basis.

***Section 29: (a) The Contractor must, at its expense, arrange for a background check for each of its employees, as well as for the employees of its subcontractors, who will have access to Commonwealth Services Locations, either through on site or remote access. Background checks are to be conducted via the Request for Criminal Record Check form and procedure found at <http://www.psp.state.pa.us/psplib/psp/sp4-164.pdf> . The background check must be conducted prior to initial access by a Contractor Personnel and annually thereafter.***

## Verizon Business Response

The frequency for repeating background checks should be limited to every three years. The reference to the website should be deleted as inapplicable. Verizon, not the Commonwealth will be performing the checks. Verizon proposes modifying the provision as follows:

(a) The Contractor must, at its expense, arrange for a background check for each of its employees, as well as for the employees of its subcontractors, who will have access to Commonwealth Services Locations, either through on site or remote access. ~~Background checks are to be conducted via the Request for Criminal Record Check form and procedure found at <http://www.psp.state.pa.us/psplib/psp/sp4-164.pdf>~~ The background check must be conducted prior to initial access by a Contractor Personnel and ~~annually~~ **every three years** thereafter, **when permitted by applicable law.**

***Section 30: (a) All disputes between the parties arising under or relating to this Contract shall initially be referred in writing by either party to the Contractor Project Manager and the Commonwealth Project Manager. If the Contractor Project Manager and the Commonwealth Project Manager are unable to resolve the dispute within ten (10) Commonwealth business day(s) after referral of the matter to them or upon the earlier request by either the Contractor Project Manager or the Commonwealth Project Manager, the parties shall submit the dispute to the Management Committee for immediate review.***

***(b) Within ten (10) Commonwealth business days after any dispute between the parties is submitted to the Management Committee pursuant to Section 30(a), the Management Committee shall meet for the purpose of attempting to resolve such dispute. At any meeting of the Management Committee at which more than one (1) dispute will be considered, Commonwealth may establish the order in which such disputes shall be addressed. If the Management Committee is unable to resolve a dispute within fifteen (15) Commonwealth business days after the date of the initial meeting of the Management Committee during which such dispute was considered, the Management Committee shall immediately notify Commonwealth and Contractor pursuant to Section 30(c).***

***(c) In the event of a controversy or claim arising from the Contract that has not been resolved by the above process, the Contractor must, within six months, file a written claim with the contracting officer for a determination. The claim shall state all grounds upon which the Contractor asserts a controversy exists***

***(1) The Commonwealth shall review timely-filed claims and issue a final determination, in writing, regarding the claim. The final determination shall be issued within 120 days of the receipt of the claim, unless extended by consent of the contracting officer and the Contractor. The Commonwealth shall send its written determination to the Contractor. If the Commonwealth fails to issue a final determination within the 120 days (unless extended by consent of the parties), the claim shall be deemed denied. The Commonwealth's determination shall be the final order of the purchasing agency.***

***(2) Within fifteen (15) days of the mailing date of the determination denying a claim or within 135 days of filing a claim if no extension is agreed to by the parties, whichever occurs first, the Contractor may file a statement of claim with the Commonwealth Board of Claims.***

***(3) Each of Commonwealth and Contractor acknowledge that the provision of the Services is critical to the operations of Commonwealth. Accordingly, in the event of a dispute between Commonwealth and Contractor arising under or relating to this Contract, Contractor shall continue to provide the Services in accordance with the terms of this Contract during the pendency of the resolution of such dispute, including the final judicial resolution thereof by Commonwealth's Board of Claims or any appeal thereof, and Commonwealth shall compensate the Contractor pursuant to the terms of the Contract.***

## Verizon Business Response

Verizon proposes to replace this provision with the following:

“Any controversy, claim, or dispute (“Disputed Claim”) arising out of or relating to this Agreement, except for claims relating to indemnity, infringement, or confidentiality obligations or matters relating to injunctions or other equitable relief (together “Equitable Claims”), shall be first subject to a thirty (30) day negotiation period between the parties in which each party shall disclose to the other party all such documents, facts, statements and any other information which are reasonably requested by the other party and are relevant to the dispute in question. Should such negotiations fail to resolve the dispute within thirty (30) calendar days, Disputed Claims shall be resolved by binding arbitration of a single arbitrator in accordance with the Commercial Arbitration Rules of the American Arbitration Association. The decision of the arbitrator shall be based upon this Agreement and applicable law. The decision of the arbitrator shall be reduced to writing, shall be final and binding except for fraud, misconduct, or errors of law, and judgment upon the decision rendered may be entered in any court having jurisdiction thereof. In all arbitrations, the arbitrator must give effect to applicable statutes of limitation subject to limitation of actions terms set forth in this Agreement, and shall not be afforded any authority to award relief in excess of what this Agreement provides or to order consolidation or class arbitrations. The arbitrator shall have no authority to award punitive damages in any Disputed Claim. The parties agree that any such claims arising under this Agreement must be pursued on an individual basis in accordance with the procedure noted above. Even if applicable law permits class actions or class arbitrations, the ADR procedure agreed to herein applies and the parties waive any rights to pursue any claim arising under this Agreement on a class basis. The arbitration shall be held in a mutually agreed to location, and shall be final and binding on both parties. Each party will bear its own costs of arbitration but shall split equally the fees of the arbitration and the arbitrator.”

***Section 31: (a) The Contractor agrees to guard the confidentiality of the Commonwealth with the same diligence with which it guards its own proprietary information. If the Contractor needs to disclose all or part of project materials to third parties to assist in the work or service performed for the Commonwealth, it may do so only if such third parties sign agreements containing substantially the same provisions as contained in this Article 31 (CONFIDENTIALITY). The Commonwealth***

*agrees to protect the confidentiality of Contractor's confidential information. In order for information to be deemed to be confidential, the party claiming confidentiality must designate the information as "confidential" in such a way as to give notice to the other party. The parties agree that such confidential information shall not be copied, in whole or in part, except when essential for authorized use under this Contract. Each copy of such confidential information shall be marked by the party making the copy with all confidentiality notices appearing in the original. Upon termination or cancellation of this Contract or any license granted hereunder, the receiving party will return to the disclosing party all copies of the confidential information in the receiving party's possession, other than one copy, which may be maintained for archival purposes only. Both parties agree that a material breach of these requirements may, after failure to cure within the time frame specified in this Contract, and at the discretion of the non-breaching party, result in termination for default pursuant to Section 27(c).*

*(b) The obligations stated in this Article 31 (CONFIDENTIALITY) do not apply to information:*

*(1) Already known to the recipient at the time of disclosure other than through the contractual relationship;*

*(2) Independently generated by the recipient and not derived from the information supplied by the disclosing party;*

*(3) Known or available to the public, except where such knowledge or availability is the result of unauthorized disclosure by the recipient of the proprietary information;*

*(4) Disclosed to the recipient without a similar restriction by a third party who has the right to make such disclosure; or*

*(5) Required to be disclosed by the recipient by law, regulation, court order, or other legal process.*

*(c) There shall be no restriction with respect to the use or disclosure of any ideas, concepts, know-how, or data processing techniques developed alone or jointly with the Commonwealth in connection with Services provided to the Commonwealth under this Contract.*

## **Verizon Business Response**

Verizon seeks mutuality and proposes to replace this provision with the following:

"Except as required by law or regulation, each party promises that during the Term and for three years after, it will use the other party's Confidential Information only for purposes of this Agreement, not disclose it to third parties except as provided below, and protect it from disclosure using the same degree of care it uses for its own Confidential Information (but no less than a reasonable degree of care).

"Confidential Information" means information (in whatever form) designated as confidential by the disclosing party by conspicuous markings (if tangible Confidential Information) or by announcement at the time of initial disclosure (if oral Confidential Information) or if not so marked or announced should reasonably have been understood as confidential to the disclosing party (or one of its affiliates or subcontractors), either because of legends or other markings, the circumstances of

disclosure or the nature of the information itself and that (i) relates to this Agreement or changes to this Agreement; (ii) relates to the disclosing party's customers, products, services, developments, trade secrets, know-how or personnel; and (iii) is received by the receiving party from the disclosing party during the Term. Confidential Information does not include information that: (a) is in the possession of the receiving party free of any obligation of confidentiality at the time of its disclosure; (b) is or becomes publicly known other than by a breach of this provision; (c) is received without restriction from a non-party free to disclose it; or (d) is developed independently by the receiving party without reference to the Confidential Information. In addition, information, whether or not Confidential Information, may be disclosed by a receiving party as may be required or authorized by applicable law, rule, regulation, or lawful process provided that the receiving party, to the extent practicable and permitted by applicable law, rule, regulation, or lawful process, first notifies the disclosing party in order to permit the disclosing party to seek reasonable protective arrangements. "

***Section 32: a) During the Contract term, Contractor shall maintain at its own expense, and require subcontractors listed in Schedule I (Approved Subcontractors) and their respective successors as subcontractors to Contractor under this Contract to maintain at their own expense or Contractor's expense, insurance of the type and in the amounts specified below and issued by companies authorized to conduct such business under the laws of Pennsylvania:***

***(1) Statutory workers' compensation in accordance with all applicable Federal, state and local requirements, and employer liability in an amount not less than \$2,000,000 per occurrence;***

***(2) Comprehensive general public liability (including contractual liability insurance) in an amount not less than \$5,000,000 per occurrence;***

***(3) Comprehensive automobile liability covering all vehicles that Contractor or such subcontractors owns, hires, or leases in an amount not less than \$5,000,000 per occurrence (combined single limit for bodily injury and property damages).***

***(4) Personal property insurance, on a replacement basis, covering all of Contractor's and Contractor's Agents' personal property located at any Contractor Services Location.***

***(5) Professional liability/error & omission in the amount of not less than \$15,000,000 per claim.***

***(6) Comprehensive crime insurance in an amount of not less than \$15,000,000 per claim.***

***(7) Umbrella/excess in an amount of not less than \$15,000,000 per occurrence.***

***For purposes hereof, Contractor and such subcontractors may maintain "umbrella" insurance policies to fulfill the foregoing insurance requirements, as appropriate.***

***(b) Prior to the expiration of any then effective insurance policy, Contractor shall furnish to Commonwealth certificates of insurance or other appropriate documentation (including evidence of renewal of insurance) evidencing all coverage referenced above and naming Commonwealth as an additional insured to the extent of Contractor's indemnities contained in this Contract. Contractor shall have included in all policies of***



***insurance required hereunder a waiver by the insurer of all right of subrogation against Commonwealth in connection with any loss or damage thereby insured against. Such certificates or other documentation will include a provision whereby thirty (30) days' notice must be received by Commonwealth prior to coverage cancellation or alteration of the coverage by either Contractor or its subcontractors or the applicable insurer. Such cancellation or alteration shall not relieve Contractor of its continuing obligation to maintain insurance coverage in accordance with this Article 32 (INSURANCE).***

***(c) During the Contract term, Contractor shall require each of its Approved Subcontractors and any other subcontractors performing any Services on-site at any of the Contractor Services Locations to maintain at their own expense or Contractor's expense, insurance of the type and in the amounts specified below:***

***(1) Statutory workers' compensation in accordance with all applicable Federal, state and local requirements, and employer liability in an amount not less than \$500,000 per occurrence;***

***(2) Comprehensive general public liability (including contractual liability insurance) in an amount not less than \$1,000,000 per occurrence;***

***(3) If any of the Subcontractor personnel will be on-site at any of Commonwealth's or Contractor's facilities, comprehensive automobile liability covering all vehicles owned, hired or leased by that Subcontractor and in an amount not less than \$1,000,000 per occurrence (combined single limit for bodily injury and property damages); and***

***(4) If the Subcontractor personnel will be on-site at any of Commonwealth's or Contractor's facilities, personal property insurance, on a replacement basis, covering all of that Subcontractor's personal property located at any such facilities.***

## **Verizon Business Response**

Errors and omissions policies are typically subject to an aggregate policy limit. Verizon will provide certificates as soon as possible after the policies are renewed. Verizon cannot include the Commonwealth as additional insured on its workers' compensation, employer's liability, or errors & omissions policies. Additionally, Verizon will name the Commonwealth as joint loss payee on the crime policy, rather than additional insured. It is illegal to provide a waiver of subrogation on workers' comp in Pennsylvania. Verizon can agree to provide a waiver of subrogation on property, general liability, and automobile liability. Verizon proposes to modify the provision as follows:

a) During the Contract term, Contractor shall maintain at its own expense, and require subcontractors listed in Schedule I (Approved Subcontractors) and their respective successors as subcontractors to Contractor under this Contract to maintain at their own expense or Contractor's expense, insurance of the type and in the amounts specified below and issued by companies authorized to conduct such business under the laws of Pennsylvania:

(1) Statutory workers' compensation in accordance with all applicable Federal, state and local requirements, and employer's liability in an amount not less than \$2,000,000 per occurrence;

(2) Comprehensive general public liability (including contractual liability insurance) in an amount not less than \$5,000,000 per occurrence;

(3) Comprehensive automobile liability covering all vehicles that Contractor or such subcontractors owns, hires, or leases in an amount not less than \$5,000,000 per occurrence (combined single limit for bodily injury and property damages).

(4) Personal property insurance, on a replacement basis, covering all of Contractor's and Contractor's Agents' personal property located at any Contractor Services Location.

(5) Professional liability/error & omission in the amount of not less than \$15,000,000 per claim—and aggregate.

(6) Comprehensive crime insurance in an amount of not less than \$15,000,000 per claim.

(7) Umbrella/excess in an amount of not less than \$15,000,000 per occurrence and aggregate.

For purposes hereof, Contractor and such subcontractors may maintain "umbrella" insurance policies to fulfill the foregoing insurance requirements, as appropriate.

(b) Prior to the expiration of any then effective insurance policy, Contractor shall furnish to Commonwealth certificates of insurance or other appropriate documentation (including evidence of renewal of insurance) evidencing all coverage referenced above and naming including Commonwealth as an additional insured to the extent of Contractor's indemnities contained in this Contract on the general and automobile liability policies. Contractor shall have included in ~~all policies of insurance required hereunder~~ the property, general liability, and automobile liability policies a waiver by the insurer of all right of subrogation against Commonwealth in connection with any loss or damage thereby insured against. Such certificates or other documentation will include a provision whereby thirty (30) days' notice must be received by Commonwealth prior to coverage cancellation or alteration of the coverage by either Contractor or its subcontractors or the applicable insurer. Such cancellation or alteration shall not relieve Contractor of its continuing obligation to maintain insurance coverage in accordance with this Article 32 (INSURANCE).

(c) During the Contract term, Contractor shall require each of its Approved Subcontractors and any other subcontractors performing any Services on-site at any of the Contractor Services Locations to maintain at their own expense or Contractor's expense, insurance of the type and in the amounts specified below:

(1) Statutory workers' compensation in accordance with all applicable Federal, state and local requirements, and employer liability in an amount not less than \$500,000 per occurrence;

(2) Comprehensive general public liability (including contractual liability insurance) in an amount not less than \$1,000,000 per occurrence;



(3) If any of the Subcontractor personnel will be on-site at any of Commonwealth's or Contractor's facilities, comprehensive automobile liability covering all vehicles owned, hired or leased by that Subcontractor and in an amount not less than \$1,000,000 per occurrence (combined single limit for bodily injury and property damages); and

(4) If the Subcontractor personnel will be on-site at any of Commonwealth's or Contractor's facilities, personal property insurance, on a replacement basis, covering all of that Subcontractor's personal property located at any such facilities.

***Section 33(d): The failure of the Contractor to notify the Commonwealth of its suspension or debarment by the Commonwealth, any other state, or the federal government shall constitute an event of default of the Contract with the Commonwealth.***

### Verizon Business Response

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Verizon proposes to modify the provision as follows:

The intentional failure of the Contractor to notify the Commonwealth of its suspension or debarment by the Commonwealth, any other state, or the federal government shall constitute an event of default of the Contract with the Commonwealth.

***Section 33 (e): (e) The Contractor agrees to reimburse the Commonwealth for the reasonable costs of investigation incurred by the Office of State Inspector General for investigations of the Contractor's compliance with the terms of this or any other agreement between the Contractor and the Commonwealth, which results in the suspension or debarment of the Contractor. Such costs shall include, but shall not be limited to, salaries of investigators, including overtime; travel and lodging expenses; and expert witness and documentary fees. The Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.***

### Verizon Business Response

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These are law enforcement costs without any cap on the amount that may be charged. Verizon proposes to eliminate this subparagraph (e).

***Section 35: The Commonwealth is exempt from all excise taxes imposed by the Internal Revenue Service and has accordingly registered with the Internal Revenue Service to make tax-free purchases under registration No. 23-23740001-K. With the exception of purchases of the following items, no exemption certificates are required and none will be issued: undyed diesel fuel, tires, trucks, gas-guzzler emergency vehicles, and sports fishing equipment. The Commonwealth is also exempt from Pennsylvania sales tax, local sales tax, public transportation assistance taxes, and fees and vehicle rental tax. The Department of Revenue regulations provide that exemption certificates are not required for sales made to governmental entities and none will be issued. Nothing in this Article 35 (TAXES-FEDERAL, STATE, AND LOCAL) is meant to exempt a construction contractor from the payment of any of these taxes or fees which are required to be paid with respect to the purchase, use, rental or lease of tangible personal property or taxable services used or transferred in connection with the performance of a construction contract.***

## Verizon Business Response

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Verizon proposes to add the following to the provision:

“The Commonwealth shall provide Contractor with a completed Commonwealth of PA Exemption Certificate as well as a completed federal excise Tax Certificate. “

***Section 36: (a) Except to the extent that the required Contractor insurance coverage under Article 32 (INSURANCE) exceeds the Contract value, the Contractor’s liability to the Commonwealth under this Contract shall be limited to the value of this Contract. This limitation will apply, except as otherwise stated in this Article 36 (LIMITATION OF LIABILITY), regardless of the form of action, whether in contract or in tort, including negligence. This limitation does not, however, apply to damages for:***

***(1) Bodily injury;***

***(2) Death;***

***(3) Intentional injury;***

***(4) Damage to real property or tangible personal property for which the Contractor is legally liable; or***

***(5) The Contractor’s indemnity of the Commonwealth for patent, copyright, trade secret or trademark protection;***

***(6) Third party claims related to confidential or proprietary data misuse of confidential information or data;***

***(7) Milestone Credits;***

***(8) Commonwealth’s losses resulting from Contractor’s gross negligence, willful misconduct, breach of representation or warranty; or***

***(9) Contractor’s abandonment of any Services, wrongful termination of the Contract or willful refusal to provide Termination Assistance Services.***

***(b) Except as provided for in Section 36(b)(1) below, neither Party will be liable for indirect, incidental, special, consequential, exemplary or punitive damages arising out of or relating to the Contract (“Excluded Damages”).***

***(1) In the case of Commonwealth, the following shall not constitute Excluded Damages:***

***(i) Additional costs to maintain the Services arising from a default by Contractor including the cost of work-arounds;***

***(ii) Loss of or corruption to Commonwealth data including, without limitation, the cost and expense of rectification of the data arising out of a default (including for recovering, reconstructing, reformatting or reloading data);***

***(iii) Expenditure or charges incurred by Commonwealth and rendered necessary as a result of a default by Contractor; and***

***(iv) Any regulatory losses, fines, expenses or other losses suffered by Commonwealth as a result of Contractor’s failure to comply with any law or regulation.***

## Verizon Business Response

Verizon proposes the following language as a replacement for Sections 36(a) and (b):

“(a) The total liability of Contractor to the Commonwealth in connection with this Contract is limited to the lesser of (a) direct damages proven by the Commonwealth; or (b) the amount paid by the Commonwealth to Contractor under this Contract for the 12 month period prior to accrual of the most recent cause of action. This limitation applies for any and all causes of actions and claims, including without limitation breach of contract, breach of warranty, negligence, strict liability, misrepresentation and other torts. This limitation does not, however, apply to damages: (a) in tort for willful or intentional misconduct; or (b) for bodily injury or death proximately caused by Contractor’s negligence; or (c) loss or damage to real property or tangible personal property proximately caused by Contractor’s negligence.

“(b) Except as provided for in Section 36(b)(1) below, neither Party will be liable for indirect, incidental, special, consequential, exemplary or punitive damages arising out of or relating to the Contract (“Excluded Damages”).

(1) In the case of Commonwealth, the following shall not constitute Excluded Damages:

(i) Additional costs to maintain the Services arising from a default by Contractor including the cost of work-arounds;

(ii) Expenditure or charges incurred by Commonwealth and rendered necessary as a result of a default by Contractor; and

(iii) Any regulatory losses, fines, expenses or other losses suffered by Commonwealth as a result of Contractor’s failure to comply with any law or regulation.”

***Section 37: (a) Except as set out in Article 45 (PATENT, COPYRIGHT, TRADEMARK, AND TRADE SECRET PROTECTION), the Contractor shall hold the Commonwealth harmless from and indemnify the Commonwealth against any and all third party claims, demands and actions based upon or arising out of any activities performed by the Contractor and its employees and agents under this Contract, provided the Commonwealth gives Contractor prompt notice of any such claim of which it learns. Pursuant to the Commonwealth Attorneys Act (71 P.S. § 732-101, et seq.), the Office of Attorney General (OAG) has the sole authority to represent the Commonwealth in actions brought against the Commonwealth. The OAG may, however, in its sole discretion and under such terms as it deems appropriate, delegate its right of defense. If OAG delegates the defense to the Contractor, the Commonwealth will cooperate with all reasonable requests of Contractor made in the defense of such suits.***

***(b) Notwithstanding the above, neither party shall enter into any settlement without the other party’s written consent, which shall not be unreasonably withheld. The Commonwealth may, in its sole discretion, allow the Contractor to control the defense and any related settlement negotiations.***

## Verizon Business Response

Verizon proposes to substitute the following language:

37.1 Each party (the “indemnitor”) shall defend, indemnify, and hold harmless the other party (the “indemnitee”) against all claims and liabilities for direct damages imposed on the indemnitee for bodily injuries, including death, and for damages to real or tangible personal property to the extent caused by the negligent or otherwise tortious acts or omissions of the indemnitor, its agents or employees in the course of performance of this Agreement.

37.2 The defense and indemnification obligations set forth in this Section 37 are contingent upon (1) the indemnitee providing the indemnitor prompt, written, and reasonable notice of the claims, demands, and/or causes of action subject to indemnification, (2) the indemnitee granting the indemnitor the right to control the defense of the same, and (3) the indemnitee’s full cooperation with the indemnitor in defense of the claim, including providing information and assistance in defending the claim. Nothing herein, however, shall restrict the indemnitee from participating, on a non-interfering basis, in the defense of the claim, demand, and/or cause of action at its own cost and expense with counsel of its own choosing. No settlement may be entered into by the indemnitor on behalf of the indemnitee that includes obligations to be performed by the indemnitee (other than payment of money that will be fully paid by the indemnitor under Sections 37.1- above) without indemnitee's prior written approval.

**Section 41: Contractor shall comply with the most stringent of:**

***(a) Commonwealth standards set out in IT Bulletins, standards and procedures related to the Services, including but not limited to those governing security, treatment of personal information, quality, change, and problem management, safety, data privacy and data security, and pervasive and transaction controls; or***

***(b) The policies, standard and procedures that are generally adopted by leading providers of Services similar in scope, scale and geographic coverage to the outsourced Services.***

## Verizon Business Response

Verizon cannot be held to unknown standards. Verizon proposes to modify subparagraph (b) as follows:

(b) The policies, standard and procedures that are generally adopted by leading providers of Services similar in scope, scale and geographic coverage to the outsourced Services as may be reviewed and agreed upon between the Commonwealth and the Contractor.

**Section 43(c): (c) As part of the Services and included in the Fees Contractor will;**

***(1) Undertake at least annually, and shall cause to be undertaken by Contractor’s material sub-contractors, a SAS 70 Type II audit that covers the common controls for any Contractor sites where Contractor performs work for Client;***

*(2) Provide the reports from such audits to Client; and*

*(3) Will perform these SAS 70 Type II audits at such time(s) that shall mean the audit report is recent enough for Commonwealth to rely upon it in meeting its reporting obligations.*

## **Verizon Business Response**

Verizon will perform such audits as are specified as required in Schedule C (SOW) for security services. If required, Verizon will work with the Commonwealth during transition to develop and price any additional SAS 70 Type II audit requirements. Verizon proposes to modify subparagraph (1) of this provision as follows:

(1) Undertake at least annually, and shall cause to be undertaken by Contractor's material sub-contractors, a SAS 70 Type II audit that covers the common controls subject to SAS-70 as set forth in Schedule C for any Contractor sites where Contractor performs work for Client.

***Section 44: (a) Notwithstanding any other provision in this Contract to the contrary, the Contractor shall be liable for any damage to any data and/or software owned or licensed by the Commonwealth if the Contractor or any of its employees, subcontractors or consultants introduces a virus or malicious, mischievous or destructive programming into the Commonwealth's software or computer networks and has failed to comply with the Commonwealth software security standards. The Commonwealth must demonstrate that the Contractor or any of its employees, subcontractors or consultants introduced the virus or malicious, mischievous or destructive programming. The Contractor's liability shall cease if the Commonwealth has not fully complied with its own software security standards.***

***(b) The Contractor shall be liable for any damages incurred by the Commonwealth including, but not limited to, the expenditure of Commonwealth funds to eliminate or remove a computer virus or malicious, mischievous or destructive programming that result from the Contractor's failure to take proactive measures to keep virus or malicious, mischievous or destructive programming from originating from the Contractor or any of its employees, subcontractors or consultants through appropriate firewalls and maintenance of anti-virus software and software security updates (such as operating systems security patches, etc.).***

***(c) In the event of destruction or modification of software, the Contractor shall eliminate the virus, malicious, mischievous or destructive programming, restore the Commonwealth's software, and be liable to the Commonwealth for any resulting damages.***

***(d) The Contractor shall be responsible for reviewing Commonwealth software security standards and complying with those standards.***

***(e) The Commonwealth may, at any time, audit, by a means deemed appropriate by the Commonwealth, any computing devices being used by representatives of the Contractor to provide services to the Commonwealth for the sole purpose of determining whether those devices have anti-virus software with current virus signature files and the current minimum operating system patches or workarounds have been installed. Devices found to be out of compliance will immediately be disconnected and will not be permitted to connect or reconnect to the Commonwealth network until the proper installations have been made.***

*(f) The Contractor may use the anti-virus software used by the Commonwealth to protect Contractor's computing devices used in the course of providing Services to the Commonwealth. It is understood that the Contractor may not install the software on any computing device not being used to provide Services to the Commonwealth, and that all copies of the software will be removed from all devices upon termination of this Contract.*

*(g) The Commonwealth will not be responsible for any damages to the Contractor's computers, data, software, etc. caused as a result of the installation of the Commonwealth's anti-virus software or monitoring software on the Contractor's computers.*

## Verizon Business Response

Verizon proposes to modify this provision as follows:

(a) Notwithstanding any other provision in this Contract to the contrary, the Contractor shall be liable for any damage to any data and/or software owned or licensed by the Commonwealth if the Contractor or any of its employees, subcontractors or consultants introduces a virus or malicious, mischievous or destructive programming into the Commonwealth's software or computer networks and has failed to comply with the Commonwealth software security standards. The Commonwealth must demonstrate that the Contractor or any of its employees, subcontractors or consultants introduced the virus or malicious, mischievous or destructive programming. The Contractor's liability shall cease if the Commonwealth has not fully complied with its own software security standards.

(b) ~~The Contractor shall be liable for any damages incurred by the Commonwealth including, but not limited to, the expenditure of Commonwealth funds to eliminate or remove a computer virus or malicious, mischievous or destructive programming that result from the Contractor's failure to take proactive measures to keep virus or malicious, mischievous or destructive programming from originating from the Contractor or any of its employees, subcontractors or consultants through appropriate firewalls and maintenance of anti-virus software and software security updates (such as operating systems security patches, etc.).~~

(c) In the event of destruction or modification of software, the Contractor shall eliminate the virus, malicious, mischievous or destructive programming, restore the Commonwealth's software, ~~and be liable to the Commonwealth for any resulting damages~~

(d) Commonwealth shall provide Contractor with Commonwealth software security standards and the Contractor shall be responsible for reviewing Commonwealth software security standards..

~~(e) The Commonwealth may, at any time, audit, by a means deemed appropriate by the Commonwealth, any computing devices being used by representatives of the Contractor to provide services to the Commonwealth for the sole purpose of determining whether those devices have anti-virus software with current virus signature files and the current minimum operating system patches or workarounds~~



~~have been installed. Devices found to be out of compliance will immediately be disconnected and will not be permitted to connect or reconnect to the Commonwealth network until the proper installations have been made.~~

(f) The Contractor may use the anti-virus software used by the Commonwealth to protect Contractor's computing devices used in the course of providing Services to the Commonwealth. It is understood that the Contractor may not install the software on any computing device not being used to provide Services to the Commonwealth, and that all copies of the software will be removed from all devices upon termination of this Contract.

(g) The Commonwealth will not be responsible for any damages to the Contractor's computers, data, software, etc. caused as a result of the installation of the Commonwealth's anti-virus software or monitoring software on the Contractor's computers.

***Section 45: (a) The Contractor shall hold the Commonwealth harmless from any suit or proceeding which may be brought by a third party against the Commonwealth, its departments, officers or employees for the alleged infringement of any United States or foreign patents, copyrights, or trademarks, or for a misappropriation of trade secrets arising out of performance of this Contract, including all work, services, materials, reports, studies, and computer programs provided by the Contractor, and in any such suit or proceeding will satisfy any final award for such infringement, including costs. The Commonwealth agrees to give Contractor prompt notice of any such claim of which it learns. Pursuant to the Commonwealth Attorneys Act 71 P.S. § 732-101, et seq., the Office of Attorney General (OAG) has the sole authority to represent the Commonwealth in actions brought against the Commonwealth. The OAG may, however, in its sole discretion and under the terms it deems appropriate, delegate its right of defense. If OAG delegates the defense to the Contractor, the Commonwealth will cooperate with all reasonable requests of Contractor made in the defense of such suits. No settlement which prevents the Commonwealth from continuing to use the Developed Materials as provided herein shall be made without the Commonwealth's prior written consent. In all events, the Commonwealth shall have the right to participate in the defense of any such suit or proceeding through counsel of its own choosing. It is expressly agreed by the Contractor that, in the event it requests that the Commonwealth to provide support to the Contractor in defending any such claim, the Contractor shall reimburse the Commonwealth for all expenses (including attorneys' fees, if such are made necessary by the Contractor's request) incurred by the Commonwealth for such support. If OAG does not delegate the defense of the matter, the Contractor's obligation to indemnify ceases. The Contractor will, at its expense, provide whatever cooperation OAG requests in the defense of the suit.***

***(b) The Contractor agrees to exercise reasonable due diligence to prevent claims of infringement on the rights of third parties. The Contractor certifies that, in all respects applicable to this Contract, it has exercised and will continue to exercise due diligence to ensure that all works produced under this Contract do not infringe on the patents, copyrights, trademarks, trade secrets or other proprietary interests of any kind which may be held by third parties. The Contractor also agrees to certify that work produced for the Commonwealth under this contract shall be free and clear from all claims of any nature.***



***(c) If the defense of the suit is delegated to the Contractor, the Contractor shall pay all damages and costs awarded therein against the Commonwealth. If information and assistance are furnished by the Commonwealth at the Contractor's written request, it shall be at the Contractor's expense, but the responsibility for such expense shall be only that within the Contractor's written authorization.***

***(d) If, in the Contractor's opinion, the products, materials, reports, studies, or computer programs furnished hereunder are likely to or do become subject to a claim of infringement of a United States patent, copyright, or trademark, or for a misappropriation of trade secret, then without diminishing the Contractor's obligation to satisfy any final award, the Contractor may, at its option and expense, substitute functional equivalents for the alleged infringing products, materials, reports, studies, or computer programs or, at the Contractor's option and expense, obtain the rights for the Commonwealth to continue the use of such products, materials, reports, studies, or computer programs.***

***(e) If any of the products, materials, reports, studies, or computer programs provided by the Contractor are in such suit or proceeding held to constitute infringement and the use or publication thereof is enjoined, the Contractor shall, at its own expense and at its option, either procure the right to publish or continue use of such infringing products, materials, reports, studies, or computer programs, replace them with non-infringing items, or modify them so that they are no longer infringing.***

***(f) If the Contractor is unable to do any of the preceding, the Contractor agrees to pay the Commonwealth:***

***(1) Any amounts paid by the Commonwealth less a reasonable amount based on the acceptance and use of the deliverable;***

***(2) Any license fee less an amount for the period of usage of any software; and***

***(3) The prorated portion of any Fees representing the time remaining in any period of service for which payment was made.***

***(g) The obligations of the Contractor under this Article 45 (PATENT, COPYRIGHT, TRADEMARK, AND TRADE SECRET PROTECTION) continue without time limit and survive the termination of this contract.***

***(h) Notwithstanding the above, the Contractor shall have no obligation for:***

***(1) Modification of any product, service, or deliverable provided by the Commonwealth;***

***(2) Any material provided by the Commonwealth to the Contractor and incorporated into, or used to prepare, a product, service, or deliverable;***

***(3) Use of the product, service, or deliverable in other than its specified operating environment;***

***(4) The combination, operation, or use of the product, service, or deliverable with other products, services, or deliverables not provided by the Contractor as a system or the combination, operation, or use of the product, service, or deliverable, with any products, data, or apparatus that the Contractor did not provide;***

***(5) Infringement of a non-Contractor product alone;***

**(6) The Commonwealth's distribution, marketing or use beyond the scope contemplated by the Contract; or**

**(7) The Commonwealth's failure to use corrections or enhancements made available to the Commonwealth by the Contractor at no charge.**

**(i) The obligation to indemnify the Commonwealth, under the terms of this Article 45 (PATENT, COPYRIGHT, TRADEMARK, AND TRADE SECRET PROTECTION), shall be the Contractor's sole and exclusive obligation for the infringement or misappropriation of intellectual property.**

## Verizon Business Response

Verizon proposes to modify this provision as follows:

Section 45: (a) The Contractor shall hold the Commonwealth harmless defend the Commonwealth from any suit or proceeding which may be brought by a third party against the Commonwealth, its departments, officers or employees for the alleged infringement of any United States or foreign (in the country in which the service is provided by Contractor) patents, copyrights, or trademarks, or for a misappropriation of trade secrets arising out of performance of this Contract, including all work, services, materials, reports, studies, and computer programs provided by the Contractor (excluding equipment and software), and shall indemnify the Commonwealth in any such suit or proceeding will satisfy any final award for such infringement, including costs. The Commonwealth agrees to give Contractor prompt notice of any such claim of which it learns. Pursuant to the Commonwealth Attorneys Act 71 P.S. § 732-101, et seq., the Office of Attorney General (OAG) has the sole authority to represent the Commonwealth in actions brought against the Commonwealth. The OAG may, however, in its sole discretion and under the terms it deems appropriate, delegate its right of defense. If OAG delegates the defense to the Contractor, the Commonwealth will cooperate with all reasonable requests of Contractor made in the defense of such suits. No settlement which prevents the Commonwealth from continuing to use the Developed Materials as provided herein shall be made without the Commonwealth's prior written consent. If there is an a suit for infringement, the OAG will automatically inform the Contractor and give Contractor the sole authority to defend and/or settle the action. In all events, the Commonwealth shall have the right to participate in the defense of any such suit or proceeding through counsel of its own choosing at the Commonwealth's expense and on a non-interfering basis. It is expressly agreed by the Contractor that, in the event it requests that the Commonwealth to provide support to the Contractor in defending any such claim, the Contractor shall reimburse the Commonwealth for all reasonable out of pocket expenses (including attorneys' fees, if such are made necessary by the Contractor's request) incurred by the Commonwealth for such support. If OAG does not delegate the defense of the matter, the Contractor's obligation to defend and indemnify ceases. The Contractor will, at its expense, provide whatever cooperation OAG requests in the defense of the suit.

~~(b) The Contractor agrees to exercise reasonable due diligence to prevent claims of infringement on the rights of third parties. The Contractor certifies that, in all respects applicable to this Contract, it has exercised and will continue to exercise due diligence to ensure that all works produced under this Contract do not infringe on~~

~~the patents, copyrights, trademarks, trade secrets or other proprietary interests of any kind which may be held by third parties. The Contractor also agrees to certify that work produced for the Commonwealth under this contract shall be free and clear from all claims of any nature.~~

(b) If the defense of the suit is delegated to the Contractor, the Contractor shall pay all damages and costs finally awarded therein against the Commonwealth. If information and assistance are furnished by the Commonwealth at the Contractor's written request, it shall be at the Contractor's expense, but the responsibility for such expense shall be only that within the Contractor's written authorization.

(c) If, in the Contractor's opinion, the products, materials, reports, studies, or computer programs furnished hereunder are likely to or do become subject to a claim of infringement of a United States patent, copyright, or trademark, or for a misappropriation of trade secret, or if any of the products, materials, reports, studies, or computer programs provided by the Contractor are in such suit or proceeding held to constitute infringement and the use or publication thereof is enjoined, then without diminishing the Contractor's obligation to satisfy any final award, the Contractor may, at its option and expense, substitute functional equivalents for the alleged infringing products, materials, reports, studies, or computer programs or, at the Contractor's option and expense, obtain the rights for the Commonwealth to continue the use of such products, materials, reports, studies, or computer programs. . In the event neither of the foregoing is reasonably available to Contractor, Contractor shall have the right to terminate the provision of the infringing services, and Commonwealth shall have no obligation to pay for other than such services provided prior to the termination.

~~(e) If any of the products, materials, reports, studies, or computer programs provided by the Contractor are in such suit or proceeding held to constitute infringement and the use or publication thereof is enjoined, the Contractor shall, at its own expense and at its option, either procure the right to publish or continue use of such infringing products, materials, reports, studies, or computer programs, replace them with non-infringing items, or modify them so that they are no longer infringing.~~

~~(f) If the Contractor is unable to do any of the preceding, the Contractor agrees to pay the Commonwealth:~~

~~(1) Any amounts paid by the Commonwealth less a reasonable amount based on the acceptance and use of the deliverable;~~

~~(2) Any license fee less an amount for the period of usage of any software; and~~

~~(3) The prorated portion of any Fees representing the time remaining in any period of service for which payment was made.~~

(d) The obligations of the Contractor under this Article 45 (PATENT, COPYRIGHT, TRADEMARK, AND TRADE SECRET PROTECTION) continue without time limit and survive the termination of this contract.

(e) Notwithstanding the above, the Contractor shall have no obligation for:

- (1) Modification of any product, service, or deliverable provided by the Commonwealth; or by any third party (including Contractor at the request of the Commonwealth)
  - (2) Any material provided by the Commonwealth to the Contractor and incorporated into, or used to prepare, a product, service, or deliverable;
  - (3) Use of the product, service, or deliverable in other than its ~~specified operating environment~~; as permitted under the Contract;
  - (4) The combination, operation, or use of the product, service, or deliverable with other products, services, or deliverables not provided by the Contractor as a system or the combination, operation, or use of the product, service, or deliverable, with any products, data, or apparatus that the Contractor did not provide;
  - (5) Infringement of a non-Contractor product alone;
  - (6) The Commonwealth's distribution, marketing or use beyond the scope contemplated by the Contract; or
  - (7) The Commonwealth's failure to use corrections or enhancements made available to the Commonwealth by the Contractor at no charge.
  - (8) Compliance with the specifications or requirements of the Commonwealth where such compliance results in infringement.
  - (9) Any infringement or claim thereof against the Commonwealth prior to the delivery of products, services or deliverables by Contractor.
  - (10) Infringement related to content provided by or on behalf of the Commonwealth.
  - (f) The obligation to defend and indemnify the Commonwealth, under the terms of this Article 45 (PATENT, COPYRIGHT, TRADEMARK, AND TRADE SECRET PROTECTION), shall be the Contractor's sole and exclusive obligation and the Commonwealth's sole and exclusive remedy for the infringement or misappropriation of intellectual property.
- Section 46: (a) The Contractor shall not publish or otherwise disclose, except to the Commonwealth or the Contractor's subcontractors, any information or data obtained hereunder from private individuals, organizations, or public agencies, in a way that allows the information or data furnished by or about any particular person or establishment to be identified.***
- (b) The parties shall not use or disclose any information about a recipient receiving services from, or otherwise enrolled in, a Commonwealth program affected by or benefiting from services under this Contract for any purpose not connected with the parties' Contract responsibilities.***
- (c) Contractor, as directed, shall comply with all federal or state laws and regulations related to the use of information that constitutes protected health information (PHI) as defined by the regulations promulgated pursuant to the Health Insurance Portability and Accountability Act (HIPAA). By signing this Contract, the Contractor agrees to the terms of the Business Associates Agreement, which is incorporated into this Contract***

*as Appendix A. If Contract Participant, or relevant portion thereof, is a Covered Entity as defined in HIPAA, and the Contractor is performing the work of a Business Associate (which determination will be made solely in the discretion of the Issuing Agency), the Contract Participant will fill in the blanks in the attached Appendix. It is understood that Appendix A is only applicable if the Contract Participant so indicates, and, if not applicable to the entire Contract Participant, is only applicable with respect to the internal entities indicated by the Contract Participant.*

*(d) Contractor will comply with all obligations applicable to it under all applicable data protection legislation in relation to all personal data that is processed by it in the course of performing its obligations under this Contract including by:*

*(1) Maintaining a valid and up to date registration or notification under the data protection legislation; and*

*(2) Complying with all data protection legislation applicable to cross border data flows of personal data and required security measures for personal data.*

### **Verizon Business Response**

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This should be covered under confidential information. Verizon proposes to eliminate this provision.

***Section 47: As set out in Article 70 (GOVERNING LAW), the provisions of this Contract shall be construed in accordance with the provisions of all applicable laws and regulations of the Commonwealth of Pennsylvania. However, by executing this Contract, the Contractor agrees that it has and will continue to abide by the intellectual property laws of the United States of America.***

### **Verizon Business Response**

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Verizon will comply with all laws applicable to its performance under the Contract. Verizon proposes to eliminate the last sentence of this provision.

***Section 48: (a) Ownership of Properties***

***(1) All “Developed Works” shall be owned according to the provisions set forth in this Article 48 (OWNERSHIP RIGHTS).***

***(2) All software owned by the Commonwealth or its licensors (“Commonwealth Software”) as of the Effective Date, shall be and shall remain the exclusive property of the Commonwealth or its licensors, and Contractor shall acquire no rights or interests in the Commonwealth Software or Tools or that of its licensors except as described in this Article 48 (OWNERSHIP RIGHTS) or in another provision set forth in this Contract. The Contractor shall not use any Commonwealth Software, Commonwealth Tools or software or tools of its licensors for any purpose other than for completion of work to be performed under this Contract.***

***(b) Commonwealth Property—Non-Exclusive, License Grant and Restrictions***

***During the term of this Contract, Commonwealth grants to Contractor for the limited purpose of providing the Services covered under this Contract, a limited, nonexclusive, nontransferable, royalty-free right (subject to the terms of any third party agreement to which the Commonwealth is a party) to do the following:***



**(1) Obtain access to and use of the Commonwealth Software in accordance with the terms of this Contract.**

**(2) Reproduce the Commonwealth Software for archival purposes or for other purposes expressly provided for under this Contract.**

**(3) Modify the Commonwealth Software consistent with the terms and conditions of this Contract provided that Contractor agrees to assign to the Commonwealth, its rights, if any, in any derivative works resulting from Contractor's modification of the Commonwealth Software. Contractor agrees to execute any documents required to evidence this assignment and to waive any moral rights and rights of attribution provided for in Section 106A of Title 17 of the United States Code, the Copyright Act of 1976.**

**(4) Allow the Contractor's subcontractors approved by the Commonwealth to obtain access to the Commonwealth Software for the purposes of complying with the terms and conditions of this Contract; provided, however, that neither Contractor nor any of its subcontractors may decompile or reverse engineer, or attempt to decompile or reverse engineer, any of the Commonwealth Software. Commonwealth hereby represents that it has the authority to provide the license grant and rights set forth in this Article 48 (OWNERSHIP RIGHTS).**

**(5) To the extent that Contractor uses Commonwealth Software, Commonwealth Tools or software or tools of its licensor, Contractor agrees to protect the confidentiality of these works and maintain these proprietary works with the strictest confidence.**

**(c) Impact of Third Party Agreements**

**(1) Subject to the terms of any third party agreement to which the Commonwealth is a party, (i) the Commonwealth shall, at no cost to Contractor, provide Contractor with access to the Commonwealth Software in the form in use by Commonwealth as of the Effective Date of this Contract and, (ii) Contractor, as part of the Services to be rendered under this Contract, shall compile and, as changes are made, update a list of all of the Commonwealth Software then in use by Contractor or any of its subcontractors in connection with Contractor's performance of the Services required by this Contract.**

**(2) Contractor shall have financial and administrative responsibility for obtaining any third party consents and any additional licenses that may be necessary for Commonwealth to transfer the Services to Contractor and for Contractor to provide the Services to Commonwealth.**

**(d) Reservation of Rights**

**All rights, not expressly granted here to Contractor on a nonexclusive basis, including the right to grant non-exclusive licenses and other rights are reserved by the Commonwealth.**

**(e) Termination of Commonwealth License Grant**

**Upon the expiration or termination for any reason of Contractor's obligation to provide the Services under this Contract, all rights granted to Contractor in this Article 48 (OWNERSHIP RIGHTS) shall immediately cease. Contractor shall, at no cost to Commonwealth, deliver to Commonwealth all of the Commonwealth Software and Tools (including any related source code then in Contractor's possession or under its control) in the form in use as of the Effective Date of such expiration or termination.**

*Within fifteen (15) calendar days after termination, Contractor shall provide the Commonwealth with a current copy of the list of Commonwealth Software in use as of the date of such expiration or termination. Concurrently therewith, Contractor shall destroy or erase all other copies of any of the Commonwealth Software then in Contractor's possession or under its control unless otherwise instructed by Commonwealth, in writing; provided, however, that Contractor may retain one archival copy of such Commonwealth Software and Tools, until final resolution of any actively asserted pending disputes between the Parties, such retention being for the sole purpose of resolving such disputes.*

**(f) Effect of License Grant Termination**

*Consistent with the provisions of this Article 48 (OWNERSHIP RIGHTS), Contractor shall refrain from manufacturing, copying, marketing, distributing, or use of any Commonwealth Software or any other work which incorporates the Commonwealth Software. The obligations of this Article 48 (OWNERSHIP RIGHTS) shall survive any termination of this Contract.*

**(g) Use of Contractor-Owned Software**

*All software owned by Contractor (Contractor Software) and tools owned by Contractor (Contractor Tools) prior to the Effective Date of this Contract shall be and shall remain the exclusive property of Contractor. The Commonwealth shall acquire no rights or interests in the Contractor Software or the Contractor Tools by virtue of this Contract except as set forth in this Article 48 (OWNERSHIP RIGHTS).*

**(h) Required Reports, Records and Inventory of Contractor Tools and Contractor Software**

*(1) Contractor must provide a list of all Contractor Tools and Contractor Software to be delivered in connection with the deliverables or Developed Materials prior to commencing any work under the Contract. Contractor must also provide a list of all other Contractor Tools and Contractor Software intended to be used by Contractor to provide the Services under this Contract but will not become part of or necessary for the use of the Developed Materials. All Contractor Tools and Contractor Software necessary to use deliverables or Developed Materials shall be delivered to the Commonwealth along with the license set forth in Section 48(f). Contractor may amend these lists from time to time while the Contract is being carried out or upon its completion. Any Contractor Tools or Contractor Software not included on the lists will be deemed to have been created under this Contract.*

*(2) During the term of this Contract, Contractor shall maintain at its principal office books of account and records showing its actions under this Contract. Upon reasonable notice by Commonwealth, Contractor shall allow Commonwealth to inspect these records and accounts for purposes of verifying the accuracy of such accounts and records.*

*(3) In the event that Contractor fails to list a Contractor Tool or Contractor Software, but is able to demonstrate that such tool or software was independently developed by Contractor prior to the Effective Date of this Contract, Contractor shall retain complete ownership of such Contractor Tool or Contractor Software that is necessary to use the deliverables or Developed Works, provided that notice is given to the Commonwealth prior to use on the Contract.*



***(i) Expiration or Termination NonExclusive License Grant—Non-Commercial Contractor Tools and Software***

***During the Termination Assistance Period and upon the expiration or termination for any reason of Contractor's obligation to provide the Services under this Contract, Contractor shall (i) grant to Commonwealth a royalty-free, paid-up, nonexclusive, nontransferable license to use, modify, prepare derivative works and grant to third parties engaged by Commonwealth the right to use, modify, and prepare derivative works based upon all or any portion of the non-commercially available Contractor Software and the non-commercially available Contractor Tools owned by Contractor and used by Contractor in connection with the Services, the foregoing rights being granted to the full extent necessary to facilitate Commonwealth's or such third party's completion of and maintenance of the Services to be provided by Contractor under this Contract immediately prior to such expiration or termination without service degradation or interruption or loss of quality, and (ii) deliver to Commonwealth the object code version of such non-commercially available Contractor Software and such non-commercially available Contractor Tools in the form used by Contractor in connection with the Services immediately prior to such expiration or termination to allow the Commonwealth to complete and maintain such work. If Commonwealth enters into a contract that allows for the use of the Contractor Software or Contractor Tools for which a license is granted under this Article 48 (OWNERSHIP RIGHTS), the Commonwealth will include a provision in that contract that limits the use of the Contractor Software or Contractor Tools as delineated in this Article 48 (OWNERSHIP RIGHTS).***

***(j) Rules of Usage for Developed Works***

***(1) If Developed Works modify, improve, or enhance application software programs or other materials generally licensed by the Contractor, then such Developed Works shall be the property of the Contractor, and Contractor hereby grants Commonwealth an irrevocable, nonexclusive, worldwide, fully paid-up license (to include source code and relevant documentation) in perpetuity to use, modify, execute, reproduce, display, perform, prepare derivative works from and distribute, within the Commonwealth, of such Developed Works. For purposes of distribution under the license grant created by this Section, Commonwealth includes any government agency, department, instrumentality, division, unit or other office that is part of the Commonwealth of Pennsylvania, together with the State System of Higher Education (including any of its universities), any county, borough, commonwealth, city, municipality, town, township special purpose district, or other similar type of governmental instrumentality located within the geographical boundaries of the Commonwealth of Pennsylvania. If federal funds are used in creation of the Developed Works, the Commonwealth also includes any other state government as well as the federal government.***

***(2) If Developed Works modify, improve, or enhance application software***

***or other materials not licensed to the Commonwealth by the Contractor, then such modifications, improvements and enhancements shall be the property of the Commonwealth or its licensor. To the extent Commonwealth owns the software or other materials, it hereby grants to Contractor an irrevocable, nonexclusive, worldwide, fully paid-up license to use, modify, execute, reproduce, display, perform, prepare derivative works from, and distribute copies of such Developed Works. To the extent Commonwealth has a license to the software or other materials, and to the extent that it, in its sole discretion determines it is able to do so the Commonwealth will grant to Contractor an irrevocable, nonexclusive, worldwide, fully paid-up license***

*to use, modify, execute, reproduce, display, perform and distribute copies of such Developed Works.*

*(3) If Developed Works have been funded by Commonwealth, to any extent, with either Commonwealth or federal funds, and the Developed Works do not include pre-existing materials generally licensed by the Contractor, then the Commonwealth shall have all right, title, and interest (including ownership of copyright and trademark) to such Developed Works and the Commonwealth hereby grants to Contractor an irrevocable, nonexclusive, worldwide, fully paid-up license to use, modify, execute, reproduce, display, perform, prepare derivative works from, and distribute copies of such Developed Works. The Commonwealth shall exclusively own all software products first developed under the terms of this contract by the Contractor, its subcontractors or other third party vendors that are specifically developed for, engineered and integrated into the Developed Works.*

*(k) Copyright Ownership—Works Developed as Part of the Scope of Work for the Project, including Developed Works developed by Subcontractors, are the sole and exclusive property of the Commonwealth and shall be considered “works made for hire” under the United States Copyright Act of 1976, as amended, 17 United States Code. In the event that the Developed Works do not fall within the specifically enumerated works that constitute works made for hire under the United States copyright laws, Contractor agrees to assign and, upon their authorship or creation, expressly and automatically assigns all copyright interests, proprietary rights, trade secrets, and other right, title, and interest in and to such Developed Works to Commonwealth. Contractor further agrees that it will have its Subcontractors assign, and upon their authorship or creation, expressly and automatically assign all copyright interest, proprietary rights, trade secrets, and other right, title, and interest in and to the Developed Works to the Commonwealth. Commonwealth shall have all rights accorded an owner of copyright under the United States copyright laws including, but not limited to, the exclusive right to reproduce the Developed Works in multiple copies, the right to distribute, copies by sales or other transfers, the right to register all copyrights in its own name as author in the United States and in foreign countries, the right to prepare derivative works based upon the Creative Works and the right to display the Developed Works. The Contractor further agrees that it will include this requirement in any subcontractor or other agreement with third parties who in any way participate in the creation or development of Developed Works. Upon completion or termination of this Contract, all working papers, files and other documentation shall immediately be delivered by Contractor to the Commonwealth. Contractor warrants that the Developed Works are original and do not infringe any copyright, patent, trademark, or other intellectual property right of any third party and are in conformance with the intellectual property laws of the United States.*

*(l) Patent Ownership*

*(1) Contractor and its subcontractors shall retain ownership to patentable items, patents, processes, inventions or discoveries (collectively, the Patentable Items) made by the Contractor during the performance of this Contract. Notwithstanding the foregoing, the Commonwealth shall be granted a nonexclusive, nontransferable, royalty free license to use or practice the Patentable Items. Commonwealth may disclose to third parties any such Patentable Items made by Contractor or any of its subcontractors under the scope of work for the Project that have been previously publicly disclosed. Commonwealth understands and agrees that any third party disclosure will not confer any license to such Patentable Items.*

**(2) Contractor shall not use any computer program, code, or any works developed by or for Contractor independently of this Contract (“Pre-Existing Materials”) in the performance of the Services under this Contract, without the express written consent of the Commonwealth. Any Pre-Existing Materials used by Contractor for performance of Services under this Contract without Commonwealth consent shall be deemed to be Developed Works as that term is used in this Article 48 (OWNERSHIP RIGHTS). In the event that Commonwealth provides such consent, Contractor shall retain any and all rights in such Pre-Existing Materials.**

**(m) Federal Government Interests**

**It is understood that certain funding under this Contract may be provided by the federal government. Accordingly, the rights to Developed Works or patentable items of Contractors or subcontractors hereunder will be further subject to government rights as set forth in 37 C.F.R. § 401, and other applicable statutes.**

**(n) Usage Rights for Know-How and Technical Information**

**Either Party, in the ordinary course of conducting business, may use any ideas, concepts, know-how, methodologies, processes, components, technologies, algorithms, designs, modules or techniques not otherwise covered by this Article 48 (OWNERSHIP RIGHTS) relating to the Services which Contractor or Commonwealth (alone or jointly with the Commonwealth) develops or learns in connection with Contractor’s provision of Services to Commonwealth under this Contract.**

**(o) Commonwealth Intellectual Property Protection**

**Contractor acknowledges Commonwealth’s exclusive right, title and interest, including without limitation copyright and trademark rights, in and to Commonwealth Software, Commonwealth Tools and the Developed Works developed under the provisions of this Article 48 (OWNERSHIP RIGHTS), shall not in any way, at any time, directly or indirectly, do or cause to be done any act or thing contesting or in any way impairing or tending to impair any part of said right, title, and interest, and shall not use or disclose the Commonwealth Software, Commonwealth Tools, or the Developed Works without Commonwealth’s written consent, which consent may be withheld by the Commonwealth for any reason. Further, Contractor shall not in any manner represent that Contractor has any ownership interest in the Commonwealth Software, Commonwealth Tools or the Developed Works. This provision is a material part of this Article 48 (OWNERSHIP RIGHTS).**

**(p) Contractor Intellectual Property Protection**

**Commonwealth acknowledges that it has no ownership rights in the Contractor Software or Contractor Tools other than those set forth in this Contract, or as may be otherwise granted in writing.**

**(q) Source Code and Escrow Items Obligations**

**Simultaneously with delivery of the Developed Works to Commonwealth, Contractor shall deliver a true, accurate and complete copy of all source codes relating to the Developed Works. To the extent that the Developed Works include application software or other materials generally licensed by the Contractor, then the source code shall be placed in escrow, subject to the terms and conditions of an escrow contract to be executed by the Parties and an escrow agent that is acceptable to the Commonwealth.**

***(r) Contractor's Copyright Notice Obligations***

***Contractor will affix the following Copyright Notice to the Developed Works developed under this Article 48 (OWNERSHIP RIGHTS) and all accompanying documentation: "Copyright © [year] by the Commonwealth of Pennsylvania. All Rights Reserved." This notice shall appear on all tangible versions of the Developed Works delivered under this Contract and any associated documentation. It shall also be programmed into any all Developed Works delivered hereunder so that it appears at the beginning of all visual displays of such Developed Works.***

***(s) If a deliverable under this Contract is commercially available software, the Contractor hereby agrees that, before it incorporates such software into a deliverable it will inform the licensor of the software, if the Contractor is not the licensor of the software, that it will be required to enter into a license with the Commonwealth which is acceptable to the Commonwealth. The license agreement in the form attached hereto as Schedule R (Software License) is in a form that is acceptable to the Commonwealth. Commonwealth may negotiate the terms of the license agreement as appropriate to the Commonwealth's use of the software.***

## Verizon Business Response

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Verizon proposes to modify this provision as follows:

Section 48: (a) Ownership of Properties

(1) All "Developed Works" shall be owned according to the provisions set forth in this Article 48 (OWNERSHIP RIGHTS).

(2) All software owned by the Commonwealth or its licensors (other than Contractor and its subcontractors) ("Commonwealth Software") as of the Effective Date, shall be and shall remain the exclusive property of the Commonwealth or its licensors, and Contractor shall acquire no rights or interests in the Commonwealth Software or Tools or that of its licensors except as described in this Article 48 (OWNERSHIP RIGHTS) or in another provision set forth in this Contract. The Contractor shall not use any Commonwealth Software, Commonwealth Tools or software or tools of its licensors for any purpose other than for the performance of Services and completion of work to be performed under this Contract.

(b) Commonwealth Property—Non-Exclusive, License Grant and Restrictions

During the term of this Contract, Commonwealth grants to Contractor (including its contractors) for the limited purpose of providing the Services covered under this Contract, a limited, nonexclusive, nontransferable, royalty-free right (subject to the terms of any third party agreement to which the Commonwealth is a party) to do the following:

(1) Obtain access to and use of the Commonwealth Software in accordance with the terms of this Contract.

(2) Reproduce the Commonwealth Software for archival purposes or for other purposes expressly provided for under this Contract.

(3) Modify the Commonwealth Software consistent with the terms and conditions of this Contract provided that Contractor agrees to assign to the Commonwealth, its rights, if any, in any derivative works resulting from Contractor's modification of the Commonwealth Software. Contractor agrees to execute any documents required to evidence this assignment and to waive any moral rights and rights of attribution provided for in Section 106A of Title 17 of the United States Code, the Copyright Act of 1976.

(4) Allow the Contractor's subcontractors ~~approved by the Commonwealth~~ to obtain access to the Commonwealth Software for the purposes of complying with the terms and conditions of this Contract; provided, however, that neither Contractor nor any of its subcontractors may decompile or reverse engineer, or attempt to decompile or reverse engineer, any of the Commonwealth Software , except and to the extent reasonably necessary to provide the Services and perform the work. Commonwealth hereby represents that it has the authority to provide the license grant and rights set forth in this Article 48 (OWNERSHIP RIGHTS).

(5) To the extent that Contractor uses Commonwealth Software, Commonwealth Tools or software or tools of its licensor, Contractor agrees to protect the confidentiality of these works and maintain these proprietary works ~~with the strictest~~ in confidence.

(c) Impact of Third Party Agreements

(1) Subject to the terms of any third party agreement to which the Commonwealth is a party, which third party agreements shall be provided to Contractor, (i) the Commonwealth shall, at no cost to Contractor, provide Contractor with access to the Commonwealth Software in the form in use by Commonwealth as of the Effective Date of this Contract and, (ii) Contractor, as part of the Services to be rendered under this Contract, shall compile and, as changes are made, update a list of all of the Commonwealth Software then in use by Contractor or any of its subcontractors in connection with Contractor's performance of the Services required by this Contract.

(2) ~~Contractor~~ Commonwealth shall have financial and administrative responsibility for obtaining any third party consents and any additional licenses that may be necessary for Contractor to use the Commonwealth ~~to transfer the Services to Contractor and~~ Software and Tools od software and tools of its licensor for Contractor to provide the Services to Commonwealth.

(d) Reservation of Rights

All rights, in Commonwealth Software, Commonwealth Tools and the software and tools of the Commonwealth's licensors (other than Contractor and its subcontractors) not expressly granted here to Contractor on a nonexclusive basis, including the right to grant non-exclusive licenses and other rights are reserved by the Commonwealth.

(e) Termination of Commonwealth License Grant

Upon the expiration or termination for any reason of Contractor's obligation to provide the Services under this Contract, all rights granted to Contractor in this



Article 48 (OWNERSHIP RIGHTS) shall immediately cease. Contractor shall, at no cost to Commonwealth, deliver to Commonwealth all of the Commonwealth Software and Tools (including any related source code then in Contractor's possession or under its control) in the form in use by Contractor to provide Services as of the Effective Date of such expiration or termination. Within fifteen (15) calendar days after termination, Contractor shall provide the Commonwealth with a current copy of the list of Commonwealth Software in use as of the date of such expiration or termination. Concurrently therewith, Contractor shall destroy or erase all other copies of any of the Commonwealth Software then in Contractor's possession or under its control unless otherwise instructed by Commonwealth, in writing; provided, however, that Contractor may retain one archival copy of such Commonwealth Software and Tools, until final resolution of any actively asserted pending disputes between the Parties, such retention being for the sole purpose of resolving such disputes.

(f) Effect of License Grant Termination

Consistent with the provisions of this Article 48 (OWNERSHIP RIGHTS), Contractor shall refrain from manufacturing, copying, marketing, distributing, or use of any Commonwealth Software or any other work which incorporates the Commonwealth Software. The obligations of this Article 48 (OWNERSHIP RIGHTS) shall survive any termination of this Contract.

(g) Use of Contractor-Owned Software

All software owned by Contractor (Contractor Software) and tools owned by Contractor (Contractor Tools) prior to or after the Effective Date of this Contract shall be and shall remain the exclusive property of Contractor. The Commonwealth shall acquire no rights or interests in the Contractor Software or the Contractor Tools by virtue of this Contract except as and to the extent expressly set forth in this Article 48 (OWNERSHIP RIGHTS).

~~(h) Required Reports, Records and Inventory of Contractor Tools and Contractor Software~~

~~(1) Contractor must provide a list of all Contractor Tools and Contractor Software to be delivered in connection with the deliverables or Developed Materials prior to commencing any work under the Contract. Contractor must also provide a list of all other Contractor Tools and Contractor Software intended to be used by Contractor to provide the Services under this Contract but will not become part of or necessary for the use of the Developed Materials. All Contractor Tools and Contractor Software necessary to use deliverables or Developed Materials shall be delivered to the Commonwealth along with the license set forth in Section 48(f). Contractor may amend these lists from time to time while the Contract is being carried out or upon its completion. Any Contractor Tools or Contractor Software not included on the lists will be deemed to have been created under this Contract.~~

~~(2) During the term of this Contract, Contractor shall maintain at its principal office books of account and records showing its actions under this Contract. Upon reasonable notice by Commonwealth, Contractor shall allow Commonwealth to~~

~~inspect these records and accounts for purposes of verifying the accuracy of such accounts and records.~~

~~(3) In the event that Contractor fails to list a Contractor Tool or Contractor Software, but is able to demonstrate that such tool or software was independently developed by Contractor prior to the Effective Date of this Contract, Contractor shall retain complete ownership of such Contractor Tool or Contractor Software that is necessary to use the deliverables or Developed Works, provided that notice is given to the Commonwealth prior to use on the Contract.~~

~~(ih) Non-Exclusive Grant and Expiration or Termination NonExclusive License Grant—Non-Commercial Contractor Tools and Software Software license is only to use the Services and shall terminate at the end of the services.~~

~~During the Termination Assistance Period and upon the expiration or termination for any reason period of Contractor's obligation to provide the Services under this Contract, Contractor shall (i) grant to Commonwealth a royalty-free, paid-up, nonexclusive, nontransferable license to use, modify, prepare derivative works and to grant to third parties engaged by Commonwealth the right to use solely for the benefit of the Commonwealth, modify, and prepare derivative works based upon all or any portion of the non-commercially available that Contractor Software that is reasonably required by the Commonwealth to use and the non-commercially available Contractor Tools owned by Contractor and used by Contractor in connection with the Services, the foregoing rights being granted to the full extent necessary to facilitate Commonwealth's or such third party's completion of and maintenance use by Commonwealth of the Services to be provided by Contractor under this Contract immediately prior to such expiration or termination without service degradation or interruption or loss of quality, and (ii) deliver to Commonwealth the object code version of such non-commercially available Contractor Software and such non-commercially available Contractor Tools in the form used by Contractor in connection with the Services immediately prior to such expiration or termination to allow the Commonwealth to complete and maintain such work. The foregoing license shall cease upon Contractor's obligation to provide Services ceases. If Commonwealth enters into a contract that allows for the use of the Contractor Software or Contractor Tools for which a license is granted under this Article 48 (OWNERSHIP RIGHTS), the Commonwealth will include a provision in that contract that limits the use of the Contractor Software or Contractor Tools as delineated in this Article 48 (OWNERSHIP RIGHTS).~~

~~(j-i) Rules of Usage for Developed Works~~

~~(1) Except and to the extent provided in Section 48(i)(2), all Developed Works, and all intellectual property therein or based thereon, modify, improve, or enhance application software programs or other materials generally licensed by the Contractor, then such Developed Works shall be the sole and exclusive property of the Contractor, and Contractor hereby grants Commonwealth an irrevocable, nonexclusive, worldwide, fully paid-up license to use for the internal business purposes of the Commonwealth that portion of Developed Works included in or required for the use of deliverables to the Commonwealth under this Contract or for the Commonwealth to use the Services for so long as the Commonwealth uses the~~



deliverables or the Services, as applicable (to include source code and relevant documentation) in perpetuity to use, modify, execute, reproduce, display, perform, prepare derivative works from and distribute, within the Commonwealth, of such Developed Works. For purposes of distribution under the license grant created by this Section, Commonwealth includes any government agency, department, instrumentality, division, unit or other office that is part of the Commonwealth of Pennsylvania, together with the State System of Higher Education (including any of its universities), any county, borough, commonwealth, city, municipality, town, township special purpose district, or other similar type of governmental instrumentality located within the geographical boundaries of the Commonwealth of Pennsylvania to the extent that the foregoing uses such deliverables or Services. If federal funds are used in creation of the Developed Works, the Commonwealth also includes any other state government as well as the federal government to the extent that the foregoing uses such deliverables or Services.

(2) If The copyright in the portion of the Developed Works modify, improve, or enhance application software

or other materials not licensed to the Commonwealth by the Contractor, then such modifications, improvements and enhancements that was first created and delivered to the Commonwealth by Contractor in the provision of Services under this Contract that is unique and specific to the Commonwealth ("Commonwealth Copyright") shall be the sole and exclusive property of the Commonwealth, or its licensor. To the extent Commonwealth owns the software or other materials, it hereby grants to Contractor an irrevocable, nonexclusive, worldwide, fully paid-up license to use, modify, execute, reproduce, display, perform, prepare derivative works from, and distribute copies of such Developed Works. To the extent Commonwealth has a license to the software or other materials, and to the extent that it, in its sole discretion determines it is able to do so the Commonwealth will grant to Contractor an irrevocable, nonexclusive, worldwide, fully paid-up license to use, modify, execute, reproduce, display, perform and distribute copies of such Developed Works.

(3) If Developed Works have been funded by Commonwealth, to any extent, with either Commonwealth or federal funds, and the Developed Works do not include pre-existing materials generally licensed by the Contractor, then the Commonwealth shall have all right, title, and interest (including ownership of copyright and trademark) to such Developed Works and the Commonwealth hereby grants to Contractor an irrevocable, nonexclusive, worldwide, fully paid-up license to use, modify, execute, reproduce, display, perform, prepare derivative works from, and distribute copies of such Developed Works. The Commonwealth shall exclusively own all software products first developed under the terms of this contract by the Contractor, its subcontractors or other third party vendors that are specifically developed for, engineered and integrated into the Developed Works.

(ki) Copyright Ownership—Works Developed as Part of the Scope of Work for the Project, including Developed Works developed by Subcontractors, Commonwealth Copyrights are the sole and exclusive property of the Commonwealth and shall be considered "works made for hire" under the United States Copyright Act of 1976, as amended, 17 United States Code. In the event that the Developed Works Commonwealth Copyrights do not fall within the specifically enumerated works that

constitute works made for hire under the United States copyright laws, Contractor agrees to assign and, upon their authorship or creation, expressly and automatically assigns all copyright interests, proprietary rights, trade secrets, and other right, title, and interest in and to such Developed Works Commonwealth Copyrights to Commonwealth. Contractor further agrees that it will have its Subcontractors assign, and upon their authorship or creation, expressly and automatically assign all copyright interest, proprietary rights, trade secrets, and other right, title, and interest in and to the Developed Works to the Commonwealth. Commonwealth shall have all rights in Commonwealth Copyrights accorded an owner of copyright under the United States copyright laws including, but not limited to, the exclusive right to reproduce the Developed Works in multiple copies, the right to distribute, copies by sales or other transfers, the right to register all copyrights in its own name as author in the United States and in foreign countries, the right to prepare derivative works based upon the Creative Works Commonwealth Copyrights and the right to display the Developed Works Commonwealth Copyrights. The Contractor further agrees that it will include this requirement in any subcontractor or other agreement with third parties who in any way participate in the creation or development of Developed Works. Upon completion or termination of this Contract, all working papers, files and other documentation shall immediately be delivered by Contractor to the Commonwealth. Contractor warrants that the Developed Works are original and do not infringe any copyright, patent, trademark, or other intellectual property right of any third party and are in conformance with the intellectual property laws of the United States.

(k) Patent Ownership

(1) Contractor and its subcontractors shall retain ownership to patentable items, patents, processes, inventions or discoveries (collectively, the Patentable Items) made by the Contractor during the performance of this Contract. ~~Notwithstanding the foregoing, the Commonwealth shall be granted a nonexclusive, nontransferable, royalty free license to use or practice the Patentable Items. Commonwealth may disclose to third parties any such Patentable Items made by Contractor or any of its subcontractors under the scope of work for the Project that have been previously publicly disclosed. Commonwealth understands and agrees that any third party disclosure will not confer any license to such Patentable Items.~~

~~(2) Contractor shall not use any computer program, code, or any works developed by or for Contractor independently of this Contract ("Pre-Existing Materials") in the performance of the Services under this Contract, without the express written consent of the Commonwealth. Any Pre-Existing Materials used by Contractor for performance of Services under this Contract without Commonwealth consent shall be deemed to be Developed Works as that term is used in this Article 48 (OWNERSHIP RIGHTS). In the event that Commonwealth provides such consent, Contractor shall retain any and all rights in such Pre-Existing Materials.~~

(~~m~~) Federal Government Interests

It is understood that certain funding under this Contract may be provided by the federal government. Accordingly, the rights to Developed Works or patentable items of Contractors or subcontractors hereunder will be further subject to government rights as set forth in 37 C.F.R. § 401, and other applicable statutes.

(~~m~~) Usage Rights for Know-How and Technical Information

Either Party, in the ordinary course of conducting business, may use any ideas, concepts, know-how, methodologies, processes, components, technologies, algorithms, designs, modules or techniques not otherwise covered by this Article 48 (OWNERSHIP RIGHTS) relating to the Services which Contractor or Commonwealth (alone or jointly with the Commonwealth) ~~develops or~~ learns in connection with Contractor's provision of Services to Commonwealth under this Contract that are retained in the unaided memory of such Party; provided, however, no rights or license are granted under the intellectual property of the other Party or third parties.

(~~e-n~~) Commonwealth Intellectual Property Protection

Contractor acknowledges Commonwealth's claim of exclusive right, title and interest, including without limitation copyright and trademark rights, in and to Commonwealth Software, Commonwealth Tools and the ~~Developed Works~~ developed Commonwealth Copyright under the provisions of this Article 48 (OWNERSHIP RIGHTS), shall not in any way, at any time, directly or indirectly, do or cause to be done any act or thing contesting or in any way impairing or tending to impair any part of said right, title, and interest, and shall not use or disclose the Commonwealth Software, Commonwealth Tools, or the ~~Developed Works~~ Commonwealth Copyright without Commonwealth's written consent, which consent may be withheld by the Commonwealth for any reason. Further, Contractor shall not in any manner represent that Contractor has any ownership interest in the Commonwealth Software, Commonwealth Tools or the ~~Developed Works~~ Commonwealth Copyright. This provision is a material part of this Article 48 (OWNERSHIP RIGHTS).

(~~p-q~~) Contractor Intellectual Property Protection

Commonwealth acknowledges that it has no ownership rights in the Contractor Software or Contractor Tools or Developed Works (other than Commonwealth Copyright) other than those set forth in this Contract, or as may be otherwise granted in writing by the Contractor. Commonwealth acknowledges Contractor's claim of exclusive right, title and interest, including without limitation copyright and trademark rights, in and to Contractor Software, Contractor Tools and the Developed Works (other than Commonwealth Copyright) under the provisions of this Article 48 (OWNERSHIP RIGHTS), shall not in any way, at any time, directly or indirectly, do or cause to be done any act or thing contesting or in any way impairing or tending to impair any part of said right, title, and interest, and shall not use or disclose the Contractor Software, Contractor Tools, or the Developed Works (other than Commonwealth Copyright) without Contractor's written consent, which consent may be withheld by the Contractor for any reason. Further, Commonwealth shall not in any manner represent that Commonwealth has any ownership interest in the Contractor Software, Contractor Tools or the Developed Works (other than

Commonwealth Copyrights). This provision is a material part of this Article 48 (OWNERSHIP RIGHTS)..

(q) ~~Source Code and Escrow Items Obligations~~

~~Simultaneously with delivery of the Developed Works to Commonwealth, Contractor shall deliver a true, accurate and complete copy of all source codes relating to the Developed Works. To the extent that the Developed Works include application software or other materials generally licensed by the Contractor, then the source code shall be placed in escrow, subject to the terms and conditions of an escrow contract to be executed by the Parties and an escrow agent that is acceptable to the Commonwealth.~~

(~~r~~p) Contractor's Copyright Notice Obligations

Contractor will affix the following Copyright Notice to the ~~Developed Works~~ Commonwealth Copyright developed under this Article 48 (OWNERSHIP RIGHTS) and all accompanying documentation: "Copyright © [year] by the Commonwealth of Pennsylvania. All Rights Reserved." This notice shall appear on all tangible versions of the ~~Developed Works~~ Commonwealth Copyright delivered under this Contract and any associated documentation. ~~It shall also be programmed into any all Developed Works delivered hereunder so that it appears at the beginning of all visual displays of such Developed Works.~~

(~~s~~g) If a deliverable under this Contract is commercially available software, the Contractor hereby agrees that, ~~before it incorporates such software into a deliverable it will inform the licensor of the software, if the Contractor is not the licensor of the software, that it~~ software will be licensed ~~will be required to enter into a license with the Commonwealth which is acceptable to the Commonwealth~~ under the licensor's standard terms and conditions. ~~The license agreement in the form attached hereto as Schedule R (Software License) is in a form that is acceptable to the Commonwealth. Commonwealth may negotiate the terms of the license agreement as appropriate to the Commonwealth's use of the software.~~ To the extent the Contractor software is commercially available software and is owned by Contractor, such software will be licensed to the Commonwealth by Contractor at Contractor's option either pursuant to the provisions of this Section 48, Contractor's standard terms and conditions.

***Section 49: (a) Except as otherwise provided in Section 48 (OWNERSHIP RIGHTS), the Contractor shall not publish any of the results of the work without the written permission of the Commonwealth. The publication shall include the following statement: "The opinions, findings, and conclusions expressed in this publication are those of the author and not necessarily those of the Commonwealth of Pennsylvania." The Contractor shall not include in the documentation any copyrighted matter, unless the Contractor provides the Commonwealth with written permission of the copyright owner.***

***(b) Except as otherwise provided in Article 48 (OWNERSHIP RIGHTS) and the confidentiality provisions of Article 31 (CONFIDENTIALITY), the Commonwealth shall have unrestricted authority to reproduce, distribute, and use any submitted report or data designed or developed and delivered to the Commonwealth as part of the performance of the Contract.***

***(c) Rights and obligations of the parties under this Article 49 (PUBLICATION RIGHTS AND/OR COPYRIGHTS) survive the termination of this Contract.***

## Verizon Business Response

Verizon proposes to modify this provision as the follows:

~~Except as otherwise provided in Section 48 (OWNERSHIP RIGHTS), the Contractor shall not publish any of the results of the work without the written permission of the Commonwealth. The~~ **In the event Contractor publishes the results of the work under the Contract that specifically identify the Commonwealth, such publication shall be with the prior consent of the Commonwealth** and shall include the following statement: "The opinions, findings, and conclusions expressed in this publication are those of the author and not necessarily those of the Commonwealth of Pennsylvania." ~~The Contractor shall not include in the documentation any copyrighted matter, unless the Contractor provides the Commonwealth with written permission of the copyright owner.~~

~~(b) Except as otherwise provided in Article 48 (OWNERSHIP RIGHTS) and the confidentiality provisions of Article 31 (CONFIDENTIALITY), the Commonwealth shall have unrestricted authority to reproduce, distribute, and use any submitted report or data designed or developed and delivered to the Commonwealth as part of the performance of the Contract.~~

(c) Rights and obligations of the parties under this Article 49 (PUBLICATION RIGHTS AND/OR COPYRIGHTS) survive the termination of this Contract

***Section 50: In the event that the Contractor should change ownership for any reason whatsoever, the Commonwealth shall have the exclusive option of continuing under the terms and conditions of this Contract with the Contractor or its successors or assigns for the full remaining term of this Contract, or continuing under the terms and conditions of this Contract with the Contractor or its successors or assigns for such period of time as is necessary to replace the products, materials, reports, studies, or computer programs, or immediately terminating this Contract. Nothing in this Section limits the Commonwealth's exercise of any rights that the Commonwealth may have under Article 27 (TERMINATION).***

## Verizon Business Response

See response to Section 15.

***Section 53: The Contractor shall comply with all federal, state, and local laws applicable to its work, including, but not limited to, all statutes, regulations and rules that are in effect as of the Effective Date of the Contract and shall procure at its expense all licenses and all permits necessary for the fulfillment of its obligation.***

***If any existing law, regulation or policy is changed or if any new law, regulation or policy is enacted that affects the Services provided under this Contract, the parties to the Contract shall modify this Contract to the extent reasonably necessary to:***

***(a) Ensure that such Services will be in full compliance with such laws, regulations and/or policies; and***



*(b) Modify the rates applicable to such Services; and*

*(c) Address any schedule impacts.*

## **Verizon Business Response**

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Any amendment to the Contract shall be mutually agreed upon in writing by the parties.

**Section 54:** *During the term of this Contract, the Contractor agrees as follows:*

*(a) Pursuant to federal regulations promulgated under the authority of The Americans With Disabilities Act, 28 C.F.R. § 35.101, et seq., the Contractor understands and agrees that no individual with a disability shall, on the basis of the disability, be excluded from participation in this Contract or from activities provided for under this Contract. As a condition of accepting and executing this Contract, the Contractor agrees to comply with the General Prohibitions Against Discrimination, 28 C.F.R. § 35.130, and all other regulations promulgated under Title II of The Americans With Disabilities Act which are applicable to the benefits, services, programs, and activities provided by the Commonwealth of Pennsylvania through Contracts with outside Contractors.*

*(b) The Contractor shall be responsible for and agrees to indemnify and hold harmless the Commonwealth of Pennsylvania from losses, damages, expenses claims, demands, suits, and actions brought by any party against the Commonwealth of Pennsylvania as a result of the Contractor's failure to comply with the provisions of subSection (a) above.*

## **Verizon Business Response**

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Verizon notes that other provisions of the Contract address indemnity and proposes to eliminate subparagraph (b).

**Section 55:** *(a) The Contractor agrees to maintain, using its standard procedures, and in accordance with Generally Accepted Accounting Principles, books, records, documents, and other evidence pertaining to the charges under this Contract to the extent and in such detail as will properly reflect all charges for which reimbursement is claimed under the provisions of this Contract.*

*(b) The Contractor agrees to make available at the office of the Contractor at all reasonable times, and upon reasonable written notice, during the term of this Contract and the period set forth in Section 55(c) below, any of the records for inspection, audit, or reproduction by any authorized Commonwealth representative. To the extent allowed by law, the Commonwealth agrees to maintain any documents so provided in accordance with the confidentiality provisions in Article 31 (CONFIDENTIALITY).*

*(c) The Contractor shall preserve and make available its records for a period of three (3) years from the date of final payment under this Contract:*

*(1) If this Contract is completely or partially terminated, the records relating to the work terminated shall be preserved and made available for a period of three (3) years from the date of any resulting final settlement.*

*(2) Non-privileged records which relate to litigation or the settlement of claims arising out of the performance of this Contract, or charges under this Contract as to which*



*exception has been taken by the auditors, shall be retained by the Contractor until such litigation, claims, or exceptions have been finally resolved.*

*(d) Except for documentary evidence retained pursuant to Section 55(c)(2) above, the Contractor may in fulfillment of its obligation to retain its records as required by this Article 55 (EXAMINATION OF RECORDS) substitute photographs, microphotographs, or other authentic reproductions of such records, after the expiration of three (3) years following the last day of the month of reimbursement to the Contractor of the invoice or voucher to which such records relate, unless a shorter period is authorized by the Commonwealth with the concurrence of its auditors.*

*(e) The provisions of this Article 55 (EXAMINATION OF RECORDS) shall be applicable to and included in each subcontract hereunder. The term "subcontract" as used in this contract only, excludes purchase orders not exceeding \$1,000 and subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public.*

## Verizon Business Response

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Verizon proposes to substitute the following for subparagraphs (b) and (c):

"The Commonwealth shall have the right, at reasonable times and at a site designated by the Commonwealth, to audit the books, documents and records of the Contractor to the extent that the books, documents and records to the extent necessary to verify that correct charges have been billed under this Contract. The Contractor shall preserve books, documents and records that relate to costs or pricing data for the Contract for a period of three (3) years from date of final payment. The Contractor shall give reasonable access to such records for the above purpose to the Commonwealth and/or their authorized representatives acceptable to Contractor and subject to signature of a Nondisclosure Agreement acceptable to Contractor."

***Section 58: Each contract entered into by a governmental agency shall contain the following provisions by which the contractor agrees:***

***(a) In the hiring of any employee(s) for the manufacture of supplies, performance of work, or any other activity required under the contract or any subcontract, the contractor, subcontractor, or any person acting on behalf of the contractor or subcontractor shall not, by reason of gender, race, creed, or color, discriminate against any citizen of this Commonwealth who is qualified and available to perform the work to which the employment relates.***

***(b) Neither the contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate against or intimidate any employee involved in the manufacture of supplies, the performance of work, or any other activity required under the contract on account of gender, race, creed, or color.***

***(c) Contractors and subcontractors shall establish and maintain a written sexual harassment policy and shall inform their employees of the policy. The policy must contain a notice that sexual harassment will not be tolerated and employees who practice it will be disciplined.***

***(d) Contractors shall not discriminate by reason of gender, race, creed, or color against any subcontractor or supplier who is qualified to perform the work to which the contracts relates.***

***(e) The contractor and each subcontractor shall furnish all necessary employment documents and records to and permit access to their books, records, and accounts by the contracting agency and the Bureau of Contract Administration and Business Development, for purposes of investigation, to ascertain compliance with provisions of this Nondiscrimination/Sexual Harassment Clause. If the contractor or any subcontractor does not possess documents or records reflecting the necessary information requested, the contractor or subcontractor shall furnish such information on reporting forms supplied by the contracting agency or the Bureau of Contract Administration and Business Development.***

***(f) The contractor shall include the provisions of this Nondiscrimination/Sexual Harassment Clause in every subcontract so that such provisions will be binding upon each subcontractor.***

***(g) The Commonwealth may cancel or terminate the contract and all money due or to become due under the contract may be forfeited for a violation of the terms and conditions of this Nondiscrimination/Sexual Harassment Clause. In addition, the agency may proceed with debarment or suspension and may place the contractor in the Contractor Responsibility File.***

## **Verizon Business Response**

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Verizon believes 58 (g) is commercially unreasonable. A breach of Section 58 should be subject to the Default provision in section 27. Verizon proposes to limit the requirements of section 58(e) to that which is reasonable and lawful. Verizon proposes to eliminate section 58 (g).

### **Section 59: (a) Definitions.**

***(1) Confidential information means information that is not public knowledge, or available to the public on request, disclosure of which would give an unfair, unethical, or illegal advantage to another desiring to contract with the Commonwealth.***

***(2) Consent means written permission signed by a duly authorized officer or employee of the Commonwealth, provided that where the material facts have been disclosed, in writing, by prequalification, bid, proposal, or contractual terms, the Commonwealth shall be deemed to have consented by virtue of execution of this Contract.***

***(3) Contractor means the individual or entity that has entered into this Contract with the Commonwealth, including directors, officers, partners, managers, key employees, and owners of more than a five percent (5%) interest.***

***(4) Financial Interest means:***

***(i) Ownership of more than a 5% interest in any business; or***

***(ii) Holding a position as an officer, director, trustee, partner, employee, or the like, or holding any position of management.***

**(5) Gratuity means any payment of more than nominal monetary value in the form of cash, travel, entertainment, gifts, meals, lodging, loans, subscriptions, advances, deposits of money, services, employment, or contracts of any kind.**

**(b) The Contractor shall maintain the highest standards of integrity in the performance of this Contract and shall take no action in violation of state or federal laws, regulations, or other requirements that govern contracting with the Commonwealth.**

**(c) The Contractor shall not disclose to others any confidential information gained by virtue of this Contract.**

**(d) The Contractor shall not, in connection with this or any other Contract with the Commonwealth, directly or indirectly, offer, confer, or agree to confer any pecuniary benefit on anyone as consideration for the decision, opinion, recommendation, vote, other exercise of discretion, or violation of a known legal duty by any officer or employee of the Commonwealth.**

**(e) The Contractor shall not, in connection with this or any other Contract with the Commonwealth, directly or indirectly, offer, give, or agree or promise to give to anyone any gratuity for the benefit of or at the direction or request of any officer or employee of the Commonwealth.**

**(f) Except with the consent of the Commonwealth, neither the Contractor nor anyone in privity with him or her shall accept or agree to accept from, or give or agree to give to, any person, any gratuity from any person in connection with the performance of work under this Contract except as provided therein.**

**(g) Except with the consent of the Commonwealth, the Contractor shall not have a financial interest in any other Contractor, subcontractor, or supplier providing services, labor, or material on this project.**

**(h) The Contractor, upon being informed that any violation of these provisions has occurred or may occur, shall immediately notify the Commonwealth in writing.**

**(i) The Contractor, by execution of this Contract and by the submission of any bills or invoices for payment pursuant thereto, certifies and represents that he or she has not violated any of these provisions.**

**(j) The Contractor, upon the inquiry or request of the Inspector General of the Commonwealth or any of that official's agents or representatives, shall provide, or if appropriate, make promptly available for inspection or copying, any information of any type or form deemed relevant by the Inspector General to the Contractor's integrity or responsibility, as those terms are defined by the Commonwealth's statutes, regulations, or management directives. Such information may include, but shall not be limited to, the Contractor's business or financial records, documents, or files of any type or form which refer to or concern this contract. Such information shall be retained by the Contractor for a period of three (3) years beyond the termination of the Contract unless otherwise provided by law.**

**(k) For violation of any of the above provisions, the Commonwealth may terminate this and any other Contract with the Contractor, claim liquidated damages in an amount equal to the value of anything received in breach of these provisions, claim damages for all expenses incurred in obtaining another Contractor to complete performance hereunder, and debar and suspend the Contractor from doing business with the Commonwealth. These rights and remedies are cumulative, and the use or nonuse of any one shall not preclude the use of all or any other. These rights and remedies are**

*in addition to those the Commonwealth may have under law, statute, regulation or otherwise.*

## Verizon Business Response

Verizon proposes the following modifications so that this definition conforms to that set forth in Section 31 (Confidentiality):

(1) Confidential information **shall have the meaning specified in Schedule A (Defined Terms)** means information that is not public knowledge, or available to the public on request, disclosure of which would give an unfair, unethical, or illegal advantage to another desiring to contract with the Commonwealth.

Verizon also proposes to make the following changes:

Begin the provision with the following: "The provisions of this section shall apply if, and to the extent required by law governing Contractor and the service provided hereunder."

Modify subparagraph (b) to read as follows:

"The Contractor shall maintain the standards of integrity required by law in the performance of the Contract and shall take no action in violation of state or federal laws, regulations, or other requirements that govern contracting with the Commonwealth."

Modify subparagraph (j) to read as follows:

"The Contractor shall comply with the terms of validly issued subpoenas."

Eliminate subparagraph (k).

***Section 60: The Contractor and the Commonwealth recognize that in actual economic practice, overcharges by Contractor's suppliers resulting from violations of state and federal antitrust laws are in fact borne by the Commonwealth. As part of the consideration for the award of this Contract, and intending to be legally bound, the Contractor assigns to the Commonwealth all rights, title, and interest in and to any claims Contractor now has or may hereafter acquire under state and federal antitrust laws relating to the goods and services which are subject to this Contract***

## Verizon Business Response

Verizon proposes to modify this provision as follows:

Section 60: The Contractor and the Commonwealth recognizes that in actual economic practice, overcharges by Contractor's suppliers resulting from violations of state and federal antitrust laws are in fact **may be** borne by the Commonwealth. As part of the consideration for the award of this Contract, and intending to be legally bound, the Contractor assigns to the Commonwealth all rights, title, and interest in and to any claims Contractor now has or may hereafter acquire under state and federal antitrust laws relating to **specifically part of** the goods and services which are subject to **sold by the Contractor under** this Contract.

**Section 61; (a) Contractor represents, warrants and covenants that:**

- (1) It is a corporation duly incorporated, validly existing, and in good standing under the laws of [ ].**
- (2) It has all requisite corporate power and authority to execute, deliver, and perform its obligations under this Contract.**
- (3) Contractor is duly licensed, authorized and qualified to do business and is in good standing in Pennsylvania and in every other jurisdiction in which a license, authorization or qualification is required for the ownership or leasing of its assets or the transaction of business of the character transacted by it except where the failure to be so licensed, authorized or qualified would not have a material adverse effect on Contractor's ability to fulfill its obligations under this Contract.**
- (4) The execution, delivery and performance of this Contract by Contractor has been duly authorized by Contractor.**
- (5) Contractor shall comply with all applicable Federal, state and local laws and regulations applicable to Contractor and shall obtain all applicable permits and licenses required of Contractor in connection with its obligations under this Contract.**
- (6) Contractor has not disclosed any Confidential Information of Commonwealth.**
- (7) The Contractor Proprietary Software does not and will not, and the Developed Software and the Services will not, infringe upon the proprietary rights of any third party, provided that Contractor will have no obligation with respect to any losses to the extent the same arise out of or in connection with Commonwealth's modification or misuse of equipment, systems, programs, or products or Commonwealth's combination, operation or use with devices, data, equipment, systems, programs or products not furnished by Contractor under this Contract.**
- (8) Contractor Personnel and Subcontractors that Contractor will use to provide and perform the Services have and during the Term will have, the suitable knowledge, skills, experience, qualifications and resources to provide and perform the Services:**
  - (i) In accordance with the Contract; and**
  - (ii) In a diligent, workmanlike manner with due care and skill, consistent with the required level of quality and performance and in accordance with the Service Levels.**
- (9) The Services will comply with standards set in the Commonwealth's IT Bulletins as issued from time to time, and all internal policies and procedures as set from time to time.**
- (10) Contractor shall cooperate fully with Commonwealth and with any third party appointed by Commonwealth to the extent that such cooperation may be necessary to permit Commonwealth or such third parties to complete any work related to or impacted by the Services provided to Commonwealth by Contractor under the Contract.**
- (11) Contractor shall collaborate fully with Commonwealth or with any third party appointed by Commonwealth to the extent that such cooperation may be necessary to permit Commonwealth or such third parties to in-source or transfer to a third party any aspect of the Services then provided by Contractor under the Contract.**



## Verizon Business Response

Verizon accepts paragraph (a) subsections (1), (2), (4), (5) and (8). Verizon proposes to modify this provision as follows:

(1) It is a corporation duly incorporated, validly existing, and in good standing under the laws of [ ].

(2) It has all requisite corporate power and authority to execute, deliver, and perform its obligations under this Contract.

(3) Contractor is duly licensed, authorized and qualified to do business and is in good standing in Pennsylvania and in every other jurisdiction **where Services will be performed by Contractor pursuant to this Contract** in which a license, authorization or qualification is required for the ownership or leasing of its assets or the transaction of business of the character transacted by it except where the failure to be so licensed, authorized or qualified would not have a material adverse effect on Contractor's ability to fulfill its obligations under this Contract.

(4) The execution, delivery and performance of this Contract by Contractor has been duly authorized by Contractor.

(5) Contractor shall comply with all applicable Federal, state and local laws and regulations applicable to Contractor and shall obtain all applicable permits and licenses required of Contractor in connection with its obligations under this Contract.

(6) Contractor **will comply with the requirements of section 31 (Confidentiality)** ~~has not disclosed any Confidential Information of Commonwealth.~~

~~(7) The Contractor Proprietary Software does not and will not, and the Developed Software and the Services will not, infringe upon the proprietary rights of any third party, provided that Contractor will have no obligation with respect to any losses to the extent the same arise out of or in connection with Commonwealth's modification or misuse of equipment, systems, programs, or products or Commonwealth's combination, operation or use with devices, data, equipment, systems, programs or products not furnished by Contractor under this Contract.~~

(8) Contractor Personnel and Subcontractors that Contractor will use to provide and perform the Services have and during the Term will have, the suitable knowledge, skills, experience, qualifications and resources to provide and perform the Services:

(i) In accordance with the Contract; and

(ii) In a diligent, workmanlike manner with due care and skill, consistent with the required level of quality and performance and in accordance with the Service Levels.

~~(9) The Services will comply with standards set in the Commonwealth's IT Bulletins as issued from time to time, and all internal policies and procedures as set from time to time.~~



~~(10) Contractor shall cooperate fully with Commonwealth and with any third party appointed by Commonwealth to the extent that such cooperation may be necessary to permit Commonwealth or such third parties to complete any work related to or impacted by the Services provided to Commonwealth by Contractor under the Contract.~~

~~(11) Contractor shall collaborate fully with Commonwealth or with any third party appointed by Commonwealth to the extent that such cooperation may be necessary to permit Commonwealth or such third parties to in-source or transfer to a third party any aspect of the Services then provided by Contractor under the Contract.~~

***.Section 62: (a) By accepting this Contract, the Contractor agrees to the delivery requirements of this Contract. If a Contract schedule is not met, including Transition Milestones set out in Transition and Transformation Plans, the delay will interfere with the Commonwealth's program. In the event of any such delay, it would be impractical and extremely difficult to establish the actual damage for which the Contractor is the material cause. The Commonwealth and the Contractor therefore agree that, in the event of any such delay the amount of damage shall be the amount set forth in this Article 62 (LIQUIDATED DAMAGES) and agree that the Contractor shall pay such amount as liquidated damages, not as a penalty. Such liquidated damages are in lieu of all other damages arising from such delay.***

***(b) The amount of liquidated damages shall be three-tenths of a percent (.3%) of the total cost under this Contract for each calendar day (for a maximum of thirty (30) calendar days) following the scheduled completion date of the Contract until the date on which the Contractor satisfactorily completes all required work under the Contract.***

***(c) If, at the end of the thirty (30) day period specified in Section 62(b) above, the Contractor has not met the schedule for completion of the Contract, then the Commonwealth, at no additional expense and at its option, may either:***

***(1) Immediately terminate the Contract and all software, documentation, reports, Developed Materials and any other materials provided for or created for the Commonwealth as a result of this Contract shall be given to the Commonwealth, and the Commonwealth shall be entitled to its remedies under Section 27(c); or***

***(2) Order the Contractor to continue with no decrease in effort until the work is completed in a manner acceptable to the Commonwealth or until the Commonwealth terminates the Contract. If the Contract is continued, the liquidated damages will also continue until the work is completed.***

***(d) Liquidated damages shall be paid by the Contractor and collected by the Commonwealth by deducting them from the invoices submitted under this Contract or any other contract Contractor has with the Commonwealth, by collecting them through the performance security, if any, or by billing the Contractor as a separate item.***

***(e) To the extent that the delay is caused by the Commonwealth, no liquidated damages will be applied.***

***(f) Contractor shall not be liable for liquidated damages if the delay to the Contract arises out of causes beyond the control of and without the fault or negligence of the Contractor and/or its subcontractors. Such causes may include, but are not limited to, acts of God or of the public enemy, fires, floods, epidemics, quarantine restrictions, strikes, work stoppages, freight embargoes, acts of terrorism, and unusually severe***

*weather; but in every case, the delay must be beyond the control of, and without the fault or negligence of, the Contractor and/or its subcontractors. The Contractor shall notify the Commonwealth immediately in writing of its inability to perform because of a cause beyond the control of the Contractor.*

*(g) If the delays are caused by the default of a Subcontractor, and if such default arises out of causes beyond the control of both the Contractor and Subcontractor, and without their fault or negligence, the Contractor shall not be liable for liquidated damages for delays, unless the supplies or services to be furnished by the Subcontractor were obtainable from other sources in sufficient time to permit the Contractor to meet the required performance schedule.*

### Verizon Business Response

Verizon proposes to cap its liability for liquidated damages at one times the MRC for the specific service in question. Verizon proposes to add the following to the end of this provision:

“Notwithstanding the above, liquidated damages shall be capped at the monthly recurring charge for the service in question.”

***Section 63: Contractor, by signing this Contract, covenants that it has no undisclosed public or private interest, direct or indirect, and shall not acquire directly or indirectly any such interest, and that Contractor has no association, direct or indirect, which interest or association does or may conflict in any manner with the performance of the Services or any other obligations of Contractor under this Contract. Any such conflicts shall be disclosed to Commonwealth, and Commonwealth shall determine whether such conflict is cause for termination of this Contract. Contractor further covenants that, in the performance of this Contract, no person having such interest shall be employed by or associated with Contractor.***

### Verizon Business Response

Verizon proposes to modify the first sentence of this provision as follows:

Contractor, by signing this Contract, covenants that **to the best of its knowledge** it has no undisclosed public or private interest, direct or indirect, and shall not acquire directly or indirectly any such interest, and that Contractor has no association, direct or indirect, which interest or association does or may conflict in any manner with the performance of the Services or any other obligations of Contractor under this Contract.

***Exhibit C (Statement of Work), Section 1.452: The Offeror shall complete an independent SAS70 audit on an annual basis and provide the results to the Commonwealth.***

### Verizon Business Response

Verizon proposes to modify this provision as follows:

The Offeror shall complete an independent SAS70 audit on an annual basis **on the relevant services** and provide the results to the Commonwealth.

***Exhibit C (Statement of Work), Section 1.570: The Commonwealth shall not be liable for any un-invoiced charges submitted by the Offeror older than 60 days.***

### Verizon Business Response

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Verizon proposes to modify the provision as follows:

The Commonwealth shall not be liable for any un-invoiced charges submitted by the Offeror older than **180** days.

***Schedule F (Service Level Methodology***

### Verizon Business Response

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See response to Section 24.

***Schedule F-1 (Service Level Matrix), SLA #1 and SLA #2 : The Commonwealth requires a single monthly consolidated electronic invoice of all services.***

***Consolidated electronic invoice should be received by the 7th business day of each month***

***The sum of the individual billings on the electronic invoice shall have the same arithmetical value as the total of the electronic invoice or the Commonwealth may withhold payment until corrected.***

### Verizon Business Response

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Verizon is working toward an automated solution that will give the Commonwealth a single monthly consolidated electronic invoice of all services. However, extensive IT development will be needed in order to provide this custom invoice. Any services ordered prior to the completion of the consolidated solution will be delayed billed. Verizon cannot provide any interim consolidated billing during IT development. In lieu of delayed billing, the Customer may elect to temporarily receive our standard (not consolidated) invoices until the consolidated solution is ready.

Since the various products have different billing cycles and invoice dates, we are not able to guarantee that the invoice would be received by the 7th business day of the month.

The Customer has the right to dispute any charge on their invoice. However, any non-disputed charges must be paid according to the payment terms of the contract.

***Schedule O (Benchmarking Procedures):***

### Verizon Business Response

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Verizon proposes to negotiate appropriate benchmarking procedures at the time of Contract award based on the framework of benchmarking against similarly situated customers in terms of types of customers procuring services similar in scope, scale, geographic service area, and size of operations.

***Schedule Q (Exit Rights): As of the end of a Termination Assistance Period:***

***(a) The rights granted to Contractor by Commonwealth in Article 48 of the Contract, as applicable to the terminated Services, shall immediately terminate and Contractor shall:***

***(i) Deliver to Commonwealth, at no cost to Commonwealth, a current copy of the relevant Commonwealth Software; and***

***(ii) Destroy or erase all other copies of the relevant Commonwealth Software and Commonwealth owned materials in Contractor's possession. Upon Commonwealth's request, Contractor shall certify to Commonwealth that all such copies have been destroyed or erased;***

***(b) Unless previously delivered to Commonwealth, Contractor shall deliver to Commonwealth a copy of Contractor Proprietary Software used to provide the terminated Services;***

***(c) Upon Commonwealth's request, with respect to Contractor Third Party Software used to provide the terminated Services, Contractor shall transfer, assign or sublicense the agreements related to the applicable Contractor Third Party Software to Commonwealth or Commonwealth's designee, at no cost to the Commonwealth and on terms and condition acceptable to Commonwealth. In the event that the agreements related to any applicable Contractor Third Party Software do not permit such transfer, assignment or sublicense, Contractor shall use commercially reasonable efforts to assist Commonwealth in obtaining licenses to such Contractor Third Party Software. However, if Commonwealth is unable to obtain licenses to such Contractor Third Party Software and if requested by Commonwealth, Contractor shall assist Commonwealth in evaluating and obtaining licenses to functionally equivalent Software at Contractor's expense on terms and condition acceptable to Commonwealth;***

***(d) To the extent not otherwise addressed in this Section, Contractor shall provide to Commonwealth with respect to Contractor's proprietary patents, copyrights and other intellectual property used to provide the terminated Services as of the commencement of the applicable Termination Assistance Period, a fully paid-up, global, irrevocable, license to use, make and have made, and to sublicense to a third party to use, make and have made, in each case solely for Commonwealth's internal purposes related to the Services, Contractor's and such other proprietary patents, copyrights and other intellectual property used to provide the terminated Services;***

***(e) Upon Commonwealth's request, with respect to those agreements for maintenance, disaster recovery services or other necessary third party services used by Contractor to provide the terminated Services and, Contractor shall transfer or assign such agreements to Commonwealth or Commonwealth's designee on terms and conditions acceptable to the Commonwealth at no charge; provided, however,***

***that in no event shall this subSection be construed as requiring Contractor to transfer or assign any Contractor corporate master agreement;***

***(f) Upon Commonwealth's request, Contractor shall sell to Commonwealth or Commonwealth's designee Equipment used by Contractor primarily to provide the terminated Services at Contractor's net book value; provided, however, that, in the event Contractor is unable to transfer ownership of such Equipment due to time limitations imposed by an agreement between Contractor and a third party, Contractor shall allow Commonwealth or Commonwealth's designee to use such Equipment***

*without charge until such time as Contractor is able to transfer ownership of such Equipment to Commonwealth or Commonwealth's designee and, at such time, Contractor shall sell to Commonwealth or Commonwealth's designee such Equipment at Contractor's net book value on the date of Commonwealth's initial request for such sale.*

## Verizon Business Response

Verizon proposes to modify this provision as follows:

Schedule Q (Exit Rights): As of the end of a Termination Assistance Period:

(a) The rights granted to Contractor by Commonwealth in Article 48 of the Contract, as applicable to the terminated Services, shall immediately terminate and Contractor shall:

(i) Deliver to Commonwealth, at no cost to Commonwealth, a current copy of the relevant Commonwealth Software; and

(ii) Destroy or erase all other copies of the relevant Commonwealth Software and Commonwealth owned materials in Contractor's possession. Upon Commonwealth's request, Contractor shall certify to Commonwealth that all such copies have been destroyed or erased;

b) Upon Commonwealth's request, with respect to Contractor Third Party Software used by the Commonwealth to use the terminated Services, Contractor shall use commercially reasonable efforts to assist Commonwealth in obtaining licenses to such Contractor Third Party Software;

~~(b) Unless previously delivered to Commonwealth, Contractor shall deliver to Commonwealth a copy of Contractor Proprietary Software used to provide the terminated Services;~~

~~(c) Upon Commonwealth's request, with respect to Contractor Third Party Software used to provide the terminated Services, Contractor shall transfer, assign or sublicense the agreements related to the applicable Contractor Third Party Software to Commonwealth or Commonwealth's designee, at no cost to the Commonwealth and on terms and condition acceptable to Commonwealth. In the event that the agreements related to any applicable Contractor Third Party Software do not permit such transfer, assignment or sublicense, Contractor shall use commercially reasonable efforts to assist Commonwealth in obtaining licenses to such Contractor Third Party Software. However, if Commonwealth is unable to obtain licenses to such Contractor Third Party Software and if requested by Commonwealth, Contractor shall assist Commonwealth in evaluating and obtaining licenses to functionally equivalent Software at Contractor's expense on terms and condition acceptable to Commonwealth;~~

~~(d) To the extent not otherwise addressed in this Section, Contractor shall provide to Commonwealth with respect to Contractor's proprietary patents, copyrights and other intellectual property used to provide the terminated Services as of the commencement of the applicable Termination Assistance Period, a fully paid-up,~~

~~global, irrevocable, license to use, make and have made, and to sublicense to a third party to use, make and have made, in each case solely for Commonwealth's internal purposes related to the Services, Contractor's and such other proprietary patents, copyrights and other intellectual property used to provide the terminated Services;~~

~~(e) Upon Commonwealth's request, with respect to those agreements for maintenance, disaster recovery services or other necessary third party services used by Contractor to provide the terminated Services and, Contractor shall transfer or assign such agreements to Commonwealth or Commonwealth's designee on terms and conditions acceptable to the Commonwealth at no charge; provided, however,~~

~~that in no event shall this subSection be construed as requiring Contractor to transfer or assign any Contractor corporate master agreement;~~

~~(f) Upon Commonwealth's request, Contractor shall sell to Commonwealth or Commonwealth's designee Equipment used by Contractor primarily to provide the terminated Services at Contractor's net book value; provided, however, that, in the event Contractor is unable to transfer ownership of such Equipment due to time limitations imposed by an agreement between Contractor and a third party, Contractor shall allow Commonwealth or Commonwealth's designee to use such Equipment without charge until such time as Contractor is able to transfer ownership of such Equipment to Commonwealth or Commonwealth's designee and, at such time, Contractor shall sell to Commonwealth or Commonwealth's designee such Equipment at Contractor's net book value on the date of Commonwealth's initial request for such sale.~~

#### *Schedule A – Defined Terms*

### **Verizon Business Response**

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Verizon proposes to modify this provision as follows:

“Developed Works or Developed Materials” means all documents, sketches, drawings, designs, works, papers, files, reports, computer programs, computer documentation, data, records, software, samples or any other tangible material authored or prepared by or for Contractor in the performance of Services pursuant to this Contract

#### *Schedule R (Software License Agreement)*

### **Verizon Business Response**

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Verizon proposes to delete the Schedule R (Software License Agreement) as the terms have been addressed in Section 48.



## Part IV Statement of Work

**IV-1. Objectives.** *Exhibit A of this RFP describes the Commonwealth's goals and objectives.*

**IV-2. Nature and Scope of the Project.** *The nature and scope of the Project is to consolidate existing telecommunications contracts into a single agreement. The Commonwealth's telecommunications services encompass voice and data communications services and information security services. The following provides an overview of the Services and the associated technologies:*

### **Data Communications Services**

*The Commonwealth's data communication network provides cost-effective service that ensures reliability and predictability in computer access and performance to centrally managed computer systems. These services include, but are not be limited to:*

- *ATM*
- *Frame Relay*
- *Metro Ethernet*
- *Point-to-point*
- *Enterprise Internet*
- *Broadband Internet*
- *Wireless LAN*
- *Premise wiring*
- *Metro Fiber*

### **Verizon Response**

Verizon has read, understands and will comply.

### **Security Services**

*The Commonwealth's network security services protect the network and network accessible resources from unauthorized access, provide intrusion detection and prevention and deliver secure remote access and business partner connectivity. These services include, but may not be limited to:*

- *Firewalls*
- *Intrusion Detection Systems (IDS)*
- *Intrusion Prevention Systems (IPS)*

- *Virtual Private Networking (VPN)*
- *Proxy services*
- *Content filtering and load balancing*

### **Verizon Response**

Verizon has read, understands and will comply.

## **Voice Communications Services**

*The Commonwealth's voice services environment is inclusive of standard and specialized voice products and services which facilitate day-to-day business communications, operations and productivity. These services include, but may not be limited to:*

- *Local Service (dial tone)*
- *Long Distance (switched and dedicated)*
- *Voice messaging and Auto Attendant services*
- *Inbound toll free service (switched and dedicated)*
- *Audio and video conferencing*
- *Payphones*
- *Miscellaneous Telephone Equipment (PBX and Key systems)*
- *Premise wiring*

### **Verizon Response**

Verizon has read, understands and will comply.

## **Out of Scope Services**

*The following are out of scope for the purposes of this RFP:*

- *Wireless/Cellular Voice services*
- *Satellite communication services*
- *Inmate telephone services*
- *Calling cards*

### **Verizon Response**

Verizon has read, understands and will comply.

**IV-3. Requirements.** *The business and technical requirements are detailed in Exhibit C of this RFP. In addition to the requirements detailed in Exhibit C, the Offeror's Technical Solution Document should include the following Emergency Preparedness items.*

**a. Emergency Preparedness**

*To support continuity of operations during an emergency, including a pandemic, the Commonwealth needs a strategy for maintaining operations for an extended period of time. One part of this strategy is to ensure that essential contracts that provide critical business services to the Commonwealth have planned for such an emergency and put contingencies in place to provide needed goods and services. The Offeror shall:*

- 1. Describe how it anticipates such a crisis will impact its operations.**
- 2. Describe its emergency response continuity of operations plan. Please attach a copy of the plan, or at a minimum, summarize how it addresses the following aspects of pandemic preparedness:**
  - **employee training (describe your organization's training plan, and how frequently your plan will be shared with employees)**
  - **identified essential business functions and key employees (within Offeror's organization) necessary to carry them out**
  - **contingency plans for:**
    - **How Offeror's organization will handle staffing issues when a portion of key employees are incapacitated due to illness.**
    - **How employees in Offeror's organization will carry out the essential functions if contagion control measures prevent them from coming to the primary workplace.**
  - **How Offeror's organization will communicate with staff and suppliers when primary communications systems are overloaded or otherwise fail, including key contacts, chain of communications (including suppliers), etc.**
  - **How and when Offeror's emergency plan will be tested, and if the plan will be tested by a third-party.**

## Verizon Response

Please refer to the attached documents below.



Business\_Continuity\_Global\_Pandemic\_Pla  
Strategies.pdf



Planning\_Customer\_Stat

**IV-4. Tasks.** Exhibit C of this RFP details the specific tasks that support Telecommunications Managed Services. Schedule F-1 details the Service Levels required by the Commonwealth.

## Verizon Response

Verizon has read, understands and will comply.

**IV-5. Contract Requirements—Disadvantaged Business Participation and Enterprise Zone Small Business Participation.** All contracts containing Disadvantaged Business participation and/or Enterprise Zone Small Business participation must also include a provision requiring the selected contractor to meet and maintain those commitments made to Disadvantaged Businesses and/or Enterprise Zone Small Businesses at the time of proposal submittal or contract negotiation, unless a change in the commitment is approved by the BMWBO. All contracts containing Disadvantaged Business participation and/or Enterprise Zone Small Business participation must include a provision requiring Small Disadvantaged Business subcontractors, Enterprise Zone Small Business subcontractors and Small Disadvantaged Businesses or Enterprise Zone Small Businesses in a joint venture to perform at least 50% of the subcontract or Small Disadvantaged Business/Enterprise Zone Small Business participation portion of the joint venture.

The selected contractor's commitments to Disadvantaged Businesses and/or Enterprise Zone Small Businesses made at the time of proposal submittal or contract negotiation shall be maintained throughout the term of the contract and through any renewal or extension of the contract. Any proposed change must be submitted to BMWBO, which will make a recommendation to the Contracting Officer regarding a course of action.

If a contract is assigned to another contractor, the new contractor must maintain the Disadvantaged Business participation and/or Enterprise Zone Small Business participation of the original contract.

The selected contractor shall complete the Prime Contractor's Quarterly Utilization Report (or similar type document containing the same information) and submit it to the contracting officer of the Issuing Office and BMWBO within 10 workdays at the end of each quarter the contract is in force. This information will be used to determine the actual dollar amount paid to Small Disadvantaged Business and/or Enterprise Zone Small Business subcontractors and suppliers, and Small Disadvantaged Business and/or Enterprise Zone Small Business participants involved in joint ventures. Also, this information will serve as a record of fulfillment of the commitment the selected contractor made and for which it received Disadvantaged Business and Enterprise Zone Small Business points. If there was no activity during the quarter then the form must be completed by stating "No activity in this quarter."

**NOTE: EQUAL EMPLOYMENT OPPORTUNITY AND CONTRACT COMPLIANCE STATEMENTS REFERRING TO COMPANY EQUAL EMPLOYMENT OPPORTUNITY POLICIES OR PAST CONTRACT COMPLIANCE PRACTICES DO NOT CONSTITUTE PROOF OF DISADVANTAGED BUSINESSES STATUS OR ENTITLE AN OFFEROR TO RECEIVE CREDIT FOR DISADVANTAGED BUSINESSES UTILIZATION.**

## Verizon Response

Verizon has read and understands.

# Exhibit A Background and Objectives

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Exhibit A - Background  
and Objectives[1].pd

## Exhibit C Statement of Work

### Introduction

*This Statement of Work covers activities pertaining to the Commonwealth of Pennsylvania (“Commonwealth”) voice and data networks. These include: network administration; installations, moves, adds, and changes (IMACs); network operations; network engineering; remote access services; telecom billing, financial administration; premise voice systems; audio and video conferencing; internet services, business partner connectivity; virtual private networking (VPN); circuit/transport technology; end user communication tools; technology refresh; and support and maintenance of the Commonwealth’s Telecommunications Management System.*

*The Offeror will be expected to provide the Services described in this Statement of Work for all Commonwealth locations. Schedule L – Commonwealth Service Locations contain the list of current locations.*

*The Offeror shall provide information on the managed network services using a media that is efficient, easy to use, easily accessible by end users, and subject to approval by the Commonwealth. The Commonwealth expects that the Offeror will bring value to areas in addition to those identified in this Statement of Work. The Offeror should describe any unique capabilities it possesses for assisting the Commonwealth in achieving additional improvements and describe how it would make such capabilities available to the Commonwealth.*

### Services Overview

- *Ordering, installing, and testing equipment and software as needed in order to provide the Services, support projects, and maintain compliance with current IT environment architecture and standards.*
- *Performing corporate facilities site surveys; staging and configuring the equipment; delivering the equipment; installing the equipment; managing the installation of the Services; testing, operating and managing the IT environment.*
- *Managing site preparation and cleanup including making arrangements for access and coordination with Commonwealth’ business unit representatives at Commonwealth service locations.*
- *Managing and maintaining current network connections with Offeror resources or third party vendors.*
- *Coordinating all in-scope Offeror activities with other Commonwealth third party vendors where there are interdependencies between the network and the Services provided by such third party vendors.*
- *Cooperating with other Commonwealth third party vendors in the resolution of problems, service disruptions, or any other service degradation, where the services of each third party vendor interface with the Offeror.*



- ***Managing billing (including providing adequate invoice auditing to provide accurate invoices and appropriate credits are obtained and identified for any overpayments) from the applicable third party vendors providing transport services and requesting it in the format requested by Commonwealth. In the event such billing formats are not provided, Commonwealth will work with Offeror to address this issue with the third party vendor.***

## **Maintenance**

- ***Apply configuration management and formal procedures to remotely maintain the optimum environment for Commonwealth, to include creating and maintaining documentation, controls, and implementation of logical and physical changes.***
- ***Perform system deployment and integration.***
- ***Perform project management activities in accordance with Commonwealth policies.***
- ***Plan and coordinate the installation of copper or fiber station, riser and outside cabling at local and remote sites. Work with regional site personnel to jointly plan implementation dates that suit Commonwealth requirements.***
- ***Manage cable plant installation/construction.***
- ***Plan and install software and upgrades to maintain interoperability, availability, currency, and equipment at manufacturer's recommended version level.***
- ***Perform preventative maintenance.***
- ***Interface with other Commonwealth third party vendors.***
- ***Coordinate software upgrades/downloads with Commonwealth site contacts in accordance with change management process.***
- ***Manage inventory of software and configurations and ensure appropriate levels of backups for the inventory data.***
- ***Perform periodic assessments of software for performance and/or operational improvements, and make recommendations for implementation as appropriate***

## **Offeror Guidelines**

***This Exhibit C of the RFP contains specific functional requirements that the Offeror must meet in order to perform the requested services. The Offeror must respond to the requirements contained in this Exhibit C according to the instructions provided below. The Offeror's response must be in the prescribed format.***

***Offeror should provide clear, concise and reasonable responses. The Offeror should not postpone a response. "Offeror ABC would be happy to discuss this at a later time" is an example of a postponed response.***

## General Instructions

*The Offeror will use the electronic version of this Exhibit C (provided with the RFP materials) to respond to the requirements. The Offeror should not make any changes to formatting or text styles in the overall document. It is important that the Offeror not merge any table cells in the document.*

*The Offeror should save the files as the original filename prefixed with the Offeror's company name (e.g., "ABC – Exhibit C - SOW.doc").*

*The Offeror will return the completed files, with the new file names, as part of its overall response to the RFP.*

## Response Instructions

*The Offeror will respond to Commonwealth requirements contained in this Exhibit in only one of the following ways for each of the individual cells:*

1. *Most of the requirements in the Exhibit contain the expected responsibilities of the Offeror. These requirements are intended to elicit the concurrence of the Offeror that it will perform the requirement as written. If the Offeror has read, understood, and will comply with a functional requirement exactly as written, the Offeror should do the following:*
  - (a) *Enter a "Y" in the "Comply Y/N" column. ("Y" stands for "Yes" and indicates that the Offeror will comply with the requirement as written.)*
2. *If the Offeror does not agree to comply with a requirement as written, and/or has some modifications to the requirement language, and/or has an alternative approach to meeting the requirement, the Offeror should do the following:*
  - (a) *Place the letter "N" in the Comply column. ("N" stands for "No" and indicates Offeror does not agree with the requirement as written.)*
  - (b) *The Offeror may add a concise comment or explanation concerning the reason for non-compliance in the Offeror Response column.*
  - (c) *The Offeror should not view the possibility of requesting changes as an opportunity to re-write the entire RFP. The Commonwealth expects the Offeror to comply with the requirements as written, and the Offeror should make changes only for minor clarifications or if an Offeror will not comply with the requirement as written.*
3. *If the Offeror has been asked to describe its response (see italicized Commonwealth Requirements), the Offeror should do the following:*
  - (a) *In the Offeror Response column, write a brief statement or make reference to the appropriate section in the Offeror's Technical Solution document.*

### Statement of Work Matrix for Telecommunications Managed Services

The following Statement of Work Matrix is to clearly define responsibilities between Commonwealth and the Offeror.

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.1	<b>GENERAL REQUIREMENTS</b>		
1.2	The Offeror shall act as a single point of accountability for all subcontractors and all services provided under this contract.	Y	
1.3	The Offeror shall be responsible for coordinating with all applicable subcontractors and providers of services or product.	Y	
1.4	<i>The Offeror shall describe its relationship and/or partnership with ILEC's and other local service providers and how that relationship might benefit the Commonwealth and what complications might occur.</i>	Y	Verizon, the leading ILEC in Pennsylvania, provides geographic coverage for approximately 95% of the Commonwealth's locations. Verizon owns the infrastructure end to end for these services. Verizon has established relationships and interconnect agreements with the other ILEC providers in Pennsylvania to deliver end to end solutions for our customers who have sites that reside outside of Verizon territory. Verizon's long history of working with these ILEC's will provide seamless service delivery for the Commonwealth.
1.5	<i>The Offeror shall describe its strategy for providing each of the following services to Commonwealth locations: local exchange calls, intraLATA calls, interLATA calls within Pennsylvania, interstate calls, and international calls.</i>	Y	Verizon's strategy for basic dialtone and local exchange calls is to leverage the ILEC infrastructure we already have in place in PA to provide these services. Where Verizon is not the ILEC provider, we will leverage our relationships with the other ILECS to secure statewide coverage for local services. Verizon will provide Centrex, a managed, network-hosted communications service for the majority of the Commonwealth locations and will provide PRI and IP trunking services to support Commonwealth PBX and Key system locations.  Verizon's strategy for delivering intralata, interlata, interstate and international services is to leverage our Outbound Long Distance portfolio of services. Outbound Long Distance is a worldwide facilities-based voice service with the capability of

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p>transporting the Commonwealth's traffic from origination to termination, over one network in many locations. This wholly owned, local-to-global-to-local network will help simplify long distance communications, with the potential to reduce calling expense and increase productivity for Commonwealth agencies. Verizon will also leverage our security and fraud detection systems which are recognized as one of the most advanced in the industry to help minimize fraud for the Commonwealth.</p> <p>Verizon's digital and Voice over IP switch platforms are selected and approved for the Network, providing quality current and future services and features to the Commonwealth. These switch technologies will provide the hub for dial tone services offered within this Proposal. These platforms' sophisticated trunk connectivity to the local, inter-LATA, intra-LATA, interstate and international toll and private networks will likewise provide the quality current and next generation transport needs and requirements of the Commonwealth.</p>
1.6	The Offeror shall provide all services under this proposal to all COSTARS participants.	Y	
1.7	The Offeror shall be required to attend regularly scheduled executive status meetings held in the Harrisburg area. The Offeror shall provide the agenda prior to the meeting and have staff and subcontractors at the meeting when appropriate for the current discussions.	Y	
1.8	The Offeror shall be responsive in meeting the capacity needs of the Commonwealth.	Y	
1.9	The Offeror shall deliver services and/or equipment without any loss of existing services at that location.	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.10	<i>The Offeror shall describe its ability to support diverse downlink local access technologies, Quality of Service, and VPN capabilities (with the ability to support existing and future scaleable needs).</i>	Y	<p>Verizon has developed and deployed a highly scalable and resilient Multi-Protocol Label Switching (MPLS) virtual private network (VPN) architecture to meet the stringent requirements of the Commonwealth's mission-critical IP data networking applications. This architecture serves as the underlying infrastructure for Private IP. Verizon's design goal for Private IP is to provide a network service platform that is scalable, survivable, and efficient, while not sacrificing performance. Verizon uses best-of-breed carrier-class routers trunked over a dedicated high capacity MPLS backbone to support MPLS VPNs with end-to-end Quality of Service (QoS).</p> <p>Private IP service is based on MPLS technology, which complements Verizon's extensive public IP network capabilities. MPLS enables networks to take advantage of the best of IP, ATM, and Frame Relay by allowing the integration of Layer 2 switching (ATM and Frame Relay, for example) and Layer 3 routing (IP). The MPLS signaling protocols support and create labels required to move the traffic across the network. The labels identify the end address destinations of the network traffic.</p> <p>Access Diversity will be achieved either by using more than one connection to the Private IP network or dual routers at the customer premises. Verizon has the ability to implement multiple connections at the customer premises to provide Access Diversity into Private IP.</p>
			<p>The following services can be used to provide diversity by serving as secondary connections:</p> <ul style="list-style-type: none"> <li>▪ Enterprise DSL (EDSL)</li> <li>▪ Satellite Access to Private IP</li> <li>▪ Dial Back-Up</li> <li>▪ Frame Relay or ATM Circuit</li> </ul> <p>Verizon's Private IP Enhanced Traffic Management (ETM) is a more advanced CoS/QoS offering that will allow the Commonwealth to manage its traffic through six traffic priority classes, thus facilitating prioritization and differentiation of the Commonwealth's applications across the Private IP backbone. Each of these traffic priority classes maintains different levels of packet loss. Real Time traffic priority adds jitter; e.g., varying latency for different packets, as a parameter. The EF/Real Time CoS is reserved exclusively for the Real Time traffic priority class.</p>

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p>The six traffic classes supported are as follows:</p> <ul style="list-style-type: none"> <li>▪ Expedited Forwarding (EF) is dedicated for real-time applications such as voice. Traffic marked EF has the highest traffic priority.</li> <li>▪ Assured Forwarding 4 (AF4) is used for either video or business-critical applications such as SAP, Siebel, PeopleSoft, or Point of Sale (POS). Traffic marked AF4 has the second highest forwarding priority.</li> <li>▪ Assured Forwarding 3 (AF3) is associated with business-critical application; i.e., SAP, Siebel, PeopleSoft, POS, TN3270 emulations, Citrix. The primary difference between AF4 and AF3 is the AF4 class is associated primarily with video applications. Traffic marked AF3 has the third highest forwarding priority.</li> <li>▪ Assured Forwarding 2 (AF2) is ideal for Telnet, Extranet Web Applications, and General Data applications. Traffic marked AF2 is given fourth highest forwarding priority.</li> <li>▪ Assured Forwarding 1 (AF1) is ideal for applications that are relatively non-interactive and drop insensitive that typically span their operations over a long period of time as background occurrences, such as content distribution or database synchronization.</li> <li>▪ Best Effort (BE) has the lowest forwarding priority and is typically used for FTP, Database Synchronization, e-mail, Web surfing. Traffic marked BE has the lowest priority.</li> </ul> <p>When using ETM, either Diff-Serv Control Points (DSCP) or IP precedence will be set by the customer premises equipment (CPE) before the traffic leaves the premises. If Private IP network congestion occurs, the Verizon ETM CoS configuration gives Real-Time traffic a better delivery ratio. The most useful feature of ETM is that it allows IP precedence to be set per enterprise application. The Commonwealth can decide how Private IP will prioritize the different traffic types based on the Type of Service (ToS). Once the ToS is set, Verizon will honor the CoS requested within the limits of the traffic contract and the applicable SLA to deliver the CoS priority the Commonwealth expects.</p>
1.11	<p><i>The Offeror shall describe its ability to distribute digital communications signals for the transmission of voice, data, image and video over long distance.</i></p>	Y	<p>Verizon has a comprehensive communications solution that integrates with all aspects of the Commonwealth's applications. Verizon has the experience, the expertise, and the products to extend voice, video, and data sharing across disparate networks onto Verizon's extensive network. Verizon is positioned to build on and extend the value of the Commonwealth's network through the following:</p> <ul style="list-style-type: none"> <li>▪ Complete end-to-end designs integrating voice, video, and data</li> <li>▪ Building on Verizon's network to provide a more cost-effective investment</li> </ul>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<ul style="list-style-type: none"> <li>▪ Reduced response times and increased effectiveness</li> <li>▪ Offering scalable and expandable designs</li> <li>▪ Delivering IP managed services expertise and infrastructure</li> <li>▪ Providing IP network reach</li> <li>▪ Improved operational efficiencies</li> </ul>
1.12	<i>The Offeror shall describe its ability to utilize pre-existing local loop infrastructure as part of its service delivery model for the Commonwealth.</i>	Y	As part of Verizon's solution, pre-existing facilities will be used for as many services as possible. Verizon is the leading ILEC in Pennsylvania, providing geographic coverage for approximately 95% of the Commonwealth's locations. This allows Verizon to utilize its existing infrastructure to provide services. Verizon has also established relationships and interconnect agreements with the other ILEC providers throughout Pennsylvania, enabling end to end solutions to be delivered to sites that reside outside of Verizon territory as well.
1.13	<i>The Offeror shall describe its approach for resolving multiple mission critical situations that occur simultaneously.</i>	Y	Verizon has a mature, well developed crisis management organization to manage disasters anywhere they occur with Verizon's service area. In the US, the National Emergency Coordinating Center (NECC) is the lead organization for disaster response. The NECC brings together representatives from all operational and support organizations across Verizon for crisis management activities. In a crisis situation, the purpose of the NECC is to gather, analyze, and disseminate information; develop incident action plans; engage Verizon- and vendor-supplied resources; and communicate/coordinate with internal and external partners. Verizon manages emergencies and disasters (or multiple incidents simultaneously) using the National Incident Management System (NIMS), a government-developed and endorsed emergency management process. NIMS was chosen based on its scalability, flexibility in adapting to incidents of any type, and 35-year history of successes in managing emergencies and disasters.
1.14	<i>The Offeror shall describe its incident/outage reporting and escalation methodology and how it will be implemented across all services provided.</i>	Y	<p>A key ingredient to Verizon solution is our end-to-end Problem Management Process. This process enables Verizon to successfully manage issues, major outages and mission-critical systems along very specific escalation and severity paths, and across all of our products and services. The Problem Management Process also provides the Commonwealth with vital communications regarding service delivery and support expectations.</p> <p>The groundwork for Verizon's Problem Management Process is established during transition activities and continues to evolve and grow for the life of the relationship. The</p>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p>aim of the Problem Management process is to resolve issues or problems in a timely and effective manner and to prevent their recurrence via Verizon’s root cause analysis. Verizon uses each problem incident as an opportunity to strengthen internal and external systems and procedures, thereby enhancing the level of services to the Commonwealth.</p> <p>This process will include reviewing all identified and/or reported problems, including customer complaints, determining the cause of those problems, evaluating the need for action, establishing a commitment for resolution, implementing actions to resolve those problems, recording the results of the actions taken, and reviewing corrective actions taken as required.</p> <p>The data gathered in this process shall be used to create availability data for reporting our service performance, successes, and trends.</p> <p>The below information describes the components / information that are used to categorize and manage within the Problem/Crisis process. This information also provides guidance for Verizon personnel to understand how our business processes interact and align with Commonwealth activities.</p> <p>Problem/Crisis Process - Contains a process that involves how incidents are received and handled until their satisfactory resolution to restore availability, as well as incorporating preventative action as appropriate.</p> <p>Key components in this process include:</p> <ul style="list-style-type: none"> <li>▪ Problem Determination/Assessment</li> <li>▪ Notification and Escalation to appropriate personnel (Support, Vendors, Management and the Commonwealth)</li> <li>▪ Immediate steps for Corrective Action</li> <li>▪ Verification that the Problem has been resolved</li> <li>▪ Complete Problem Documentation</li> <li>▪ Determination of the Root Cause</li> <li>▪ Additional Corrective and Preventive Action as necessary</li> </ul> <p><b>Verizon Standard Trouble Management Process</b></p> <p>Verizon will first identify if the problem is resolvable at the help desk level. Based on the information in the problem resolution system the consultant will perform all trouble shooting steps in an attempt to resolve the customer’s problem at the first tier (Help Desk). Once all trouble-shooting steps are completed the consultant ensures all steps taken to resolve the problem are recorded in the problem record. If the consultant is able</p>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p>to resolve the problem, they verify customer satisfaction and close the record. If the consultant is unable to resolve the problem, they obtain additional information pertinent to second and third level support's trouble shooting. At this time, the record critically is also determined based upon predetermined escalation criteria.</p> <p>Throughout the life cycle of a trouble record that has been dispatched to support, automated paging notifications and escalations may occur within the guidelines of Verizon's automated paging and escalation system.</p> <p>In addition to the automated escalation processes utilized by Verizon, Service Desk Supervisors implement a manual escalation process in an effort to better serve our customers. This escalation process occurs anytime a member of the Verizon Service Desk management staff has to intervene on an open trouble record by contacting support on behalf of the customer for trouble management or customer satisfaction purposes. When a member of the Verizon management staff has to intervene on a trouble record in accordance with this process, the member of the management staff assigned to the escalation will document in the status, all escalation steps taken, including contacts with the customer and support management personnel, until resolution of the record.</p>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p><b>Escalation and Crisis Management Process:</b></p> <pre> graph TD     Start([Problem Occurs]) --&gt; Discovery[Discovery Phase Receive/answer incoming calls]     Discovery --&gt; DCMC{Determine CMC Response to the Call}     DCMC -- No --&gt; InfoCR[Informational CR NSC Helpdesk Access team NPS/ROC]     InfoCR --&gt; End1([End])     DCMC -- Yes --&gt; MC{Mission Critical?}     MC -- No --&gt; SideBridge[Side Bridge Update CR]     SideBridge --&gt; End1     MC -- Yes --&gt; Init[Initialization Phase Create Crisis Record (CR) Notify Service Providers Initialize Crisis Bridge]     Init --&gt; PD[Problem Determination Phase Engage Service Providers Identify Problem Update CR]     PD --&gt; TR[Technical Resolution Phase Develop, coordinate and verify Recovery plan Update CR]     TR --&gt; RNM{Requested to Notify Management}     RNM -- Yes --&gt; PMB[Perform Management Bridge]     PMB --&gt; TR     RNM -- No --&gt; BR[Business Recovery Phase Perform Business recovery Declare problem resolved Update CR]     TR -.-&gt; BR     BR --&gt; CL[Closure Phase Gather impact information (Outages Only) Close Bridge Send final notification Update CR]     CL --&gt; PSM([To PSM for Problem Process])     </pre>

This document contains Verizon material that shall not be disclosed, duplicated, or used for any purpose other than to evaluate this proposal.

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p><b>Crisis Manager and Escalation Process:</b></p> <p><b>Discovery Phase:</b></p> <ul style="list-style-type: none"> <li>▪ Crisis Manager:</li> <li>▪ Receives and answers incoming calls.</li> <li>▪ Gathers information from problem reporter.</li> <li>▪ Notifies CMC Command Center and staff.</li> </ul> <p><b>Initialization Phase:</b></p> <p><b>Crisis Manager:</b></p> <ul style="list-style-type: none"> <li>▪ Creates crisis record (CR).</li> <li>▪ Initializes the crisis bridge.</li> <li>▪ Begins initial notification.</li> </ul> <p><b>Problem Determination Phase:</b></p> <p><b>Crisis Manager:</b></p> <ul style="list-style-type: none"> <li>▪ Engages service providers.</li> <li>▪ Identifies service providers responsible for resolving the problem.</li> <li>▪ Ensures service provider is focused and maintain a sense of urgency.</li> <li>▪ Reconvenes the crisis bridge, as needed.</li> </ul> <p><b>Technical Resolution Phase:</b></p> <p><b>Crisis Manager:</b></p> <ul style="list-style-type: none"> <li>▪ Develops the recovery plan via an identified service provider.</li> <li>▪ Coordinates recovery plan steps.</li> <li>▪ Verifies success of the recovery plan.</li> <li>▪ Updates crisis level status.</li> </ul> <p><b>Business Recovery Phase:</b></p> <p><b>Crisis Manager:</b></p> <ul style="list-style-type: none"> <li>▪ Directs the business recovery.</li> <li>▪ Updates crisis level status.</li> </ul>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p><b>Closure Phase</b></p> <ul style="list-style-type: none"> <li>▪ Crisis Manager:</li> <li>▪ Gathers/Documents impact information.</li> <li>▪ Hands-off to PSM Incident Manager.</li> <li>▪ Closes bridge.</li> <li>▪ Sends final notifications.</li> <li>▪ Completes crisis record (CR) coding.</li> </ul> <p><b>Crisis Management and Escalation Additional Processes:</b></p> <p><b>Command Center and Lead Responsibilities:</b></p> <p><b>Performs the following tasks during weekdays:</b></p> <ul style="list-style-type: none"> <li>▪ Notifies Problem Management Team (PSM) of previous day's Crisis Events via Email.</li> <li>▪ Sends an Executive Daily Status Page.</li> <li>▪ Collects Weekly Crisis Management Metrics.</li> <li>▪ Notifies Executive Management of Crisis Event Escalations.</li> <li>▪ Management and Command Center Leads may request a Management Bridge.</li> <li>▪ Perform Management Bridges to communicate and escalate Crisis Events.</li> </ul>
1.15	The Offeror shall provide root cause analysis report directly to the requesting Commonwealth agency.	Y	
1.16	<i>In the event of sporadic excessively high-level traffic demands on provider's network backbone, the Offeror shall describe its ability to prioritize Commonwealth traffic (recognizing that PSP, PEMA, PPTN, EAS, Amber &amp; Health Alerts must take precedence over third party consumer needs).</i>	Y	<p>Verizon will utilize QoS mechanisms. Utilizing the Expedited Forwarding (EF) traffic class for this traffic allows this traffic to be prioritized over all other traffic. The EF/Real Time CoS bandwidth will be maintained regardless of the traffic type.</p> <p>Verizon's Private IP Enhanced Traffic Management (ETM) is a more advanced CoS/QoS offering that will allow Verizon to manage the Commonwealth's traffic through six traffic priority classes, thus facilitating prioritization and differentiation of the Commonwealth's applications across the Private IP backbone. Each of these traffic priority classes maintains different levels of packet loss. Real Time traffic priority adds jitter; e.g., varying latency for different packets, as a parameter. The EF/Real Time CoS is reserved exclusively for the Real Time traffic priority class.</p>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.17	The Offeror shall provide, at the earliest time possible, notice to all affected users of any scheduled or unscheduled service interruptions with consideration to Commonwealth scheduled holidays and standard work week (M -F 8 - 5).	Y	
1.18	At the time a service order is acknowledged/received, the Offeror shall determine unusual installation factors that require additional cost and notify the Commonwealth requestor of service. The Offeror shall give an itemized bill for additional cost and specified reasons to the Commonwealth.	Y	
1.19	The Offeror's measurement and monitoring of service level performance shall permit reporting at a level of detail and frequency sufficient to permit the Commonwealth to verify compliance with the service levels, and shall be subject to audit.	Y	
1.20	The Offeror shall ensure all equipment installed is new and fully warranted.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.21	The Offeror shall coordinate all managed equipment maintenance within the agencies maintenance windows.	Y	
1.22	The Offeror shall warrant all Offeror provided customer premise equipment for the duration of the Contract Term, including any Renewal Term(s), regardless of when the equipment is placed into service.	Y	
1.23	The Offeror shall provide Uninterruptible Power Supplies for any Offeror owned and managed equipment.	Y	
1.24	The Offeror shall provide the Commonwealth with a universal rate structure which charges the same rates for the same services statewide, regardless of serving distance, and/or geographical area.	N	Verizon will provide some network rates on a universal basis. However, some services, such as Private Lines, are distance sensitive, and they will be a banded rate structure.
1.25	The Offeror may provide the Commonwealth with alternative rate structures if an overall cost saving can be achieved and described.	Y	
1.26	<i>The Offeror shall describe its process for obtaining end-user satisfaction surveys and shall conduct surveys during the term</i>	Y	<b>Assumptions &amp; Approach</b> Verizon's goal is to gather meaningful data for the Commonwealth without placing a burden on the respondents. Verizon's approach combines an automated end user satisfaction survey with one-on-one end user interviews. This approach combines the

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	<i>of the contract.</i>		<p>administrative ease, respondent convenience, and quantitative results of automated electronic surveys with the high value insight and qualitative experiential results best achieved by a direct interview. Overall work will include survey and interview design, data gathering, reporting, and analysis.</p> <p><b>Stage 1: End User Automated Survey and Interview Development</b></p> <p><b>Surveys:</b> Verizon will develop the survey and interview. We will work with the Commonwealth and its stakeholders to develop a brief end user satisfaction survey appropriate for automated distribution by Verizon's ticketing system. The survey will be very brief (4-6 questions) and we will work with the same stakeholders to determine the appropriate distribution frequency.</p> <p><b>Interviews:</b> Verizon will work with the same stakeholders to design an interview-based survey with no more than 4 questions. Each question will feature a numeric answer format with the opportunity to gather corresponding respondent comments. We will also develop an interview protocol including the number of call attempts, call script, logging procedures, and follow-on questions. Finally, we will establish with the Commonwealth the number of interviews to be administered each month that will be unobtrusive to users, yet yield meaningful results. All data will be captured in a third party survey product.</p> <p><b>Stage 2: Administration</b></p> <p><b>Surveys:</b> Verizon will configure the ticketing tool to automatically deliver the end user survey to users in accordance with parameters established in Stage 1. Verizon will administer the surveys and ticketing tool on a day-to-day basis within the help desk team.</p> <p><b>Interviews:</b> Verizon will administer the interview component and will liaise with the help desk manager to identify target interviewees. This target population may be determined randomly or based on other specific criteria (users just affected by a major release, users with a high volume of help desk calls, etc.). Verizon will contact these users in accordance with the established interview protocol and will gather results in a third party survey product.</p> <p><b>Reporting:</b> Verizon will administer the reporting component and will develop a dashboard to provide a measurement of the performance by quarter.</p>
1.27	The Offeror shall provide quarterly customer satisfaction	Y	

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	surveys to the Commonwealth. The Offeror shall use these results and provide dashboard measurements to be reviewed at PMO meetings.		
1.28	The Offeror shall provide "Quarterly Inactive Reports" identifying lines and/or circuits that are not in use or have not had activity.	Y	
1.29	The Offeror shall jointly develop with the Commonwealth Service Level Agreements (SLAs) that establish minimum performance requirements for services provided. The Offeror will meet the service levels in Schedule F-1.	N	<p>Verizon looks forward to discussing the SLA performance measurements upon contract award. The Verizon-proposed solution is comprised of a series of products/services components where a number of the components offer SLAs at no additional cost. Also, the core of the solution has been recognized by consultants as industry leading and has set Verizon apart from its competition. The Verizon solution has been configured to take advantage of these products such that the Commonwealth can realize the highest degree of reliability, availability, and quality.</p> <p>Verizon is prepared to represent its available product/service SLAs at the joint meeting with the Commonwealth. Additionally, at this meeting, Verizon will discuss the need for any custom SLAs required by the Commonwealth to meet its critical business needs. Verizon has assumed that all SLAs will become effective upon the completion of the Transition.</p> <p>Given Verizon's vast experience with other large customers, Verizon is confident to be able to develop mutually agreed upon performance requirements/measurements on the products/services being proposed with any applicable price increase.</p>
1.30	The Offeror shall advise the Commonwealth of new technologies which include, but are not limited to the following: - Data and voice transport networks - Routing, switching and data	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	termination devices - Voice switching and gateway devices - Voice messaging systems - End user telephony devices - Interactive voice response systems - Automatic call distribution systems - Intrusion detection and prevention systems - Firewall systems - Broadband Internet access technologies - Internet and Web filtering technologies		

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.31	<p><i>The Offeror shall describe the training (end-user and administrative - where applicable) it will provide to the Commonwealth for various services. The Commonwealth seeks training on a regular basis to keep users up to date on such items as the Telecommunications Management System, Network Technology, voice services, etc. and to provide training in various formats such, but not limited to, classroom, web based (i.e. interactive, webinars, computer based training), and train the trainer.</i></p>	Y	<p>The Verizon team understands the value of training, and we have a long history of providing training to government customers. Over the years, Verizon has provided training on virtually all types of technology. We have trained end-users as we have moved into new technologies or transitioned from one type of service to another.</p> <p>Verizon’s training plan in support of the Commonwealth’s Telecommunications Managed services will be facilitated by a dedicated trainer who will support the course development and documentation that is specific to the Commonwealth’s needs. The trainer will be able to conduct on-site training and assist agencies with choosing training that best fits their needs.</p> <p>Verizon will provide training that will help Commonwealth agencies use Verizon products, services and tools most effectively. End user and administrative training will be available, where applicable. User guides for Verizon’s training classes will also be available online for users to download for reference.</p> <p>There are several delivery methods available to provide training in order to meet the varied needs of the agency users. Verizon will provide the following training options for the Commonwealth:</p> <p><b>Instructor-Led Virtual Classroom Courses</b></p> <p>The Virtual Classroom classes are web-based interactive sessions presented by Verizon trainers on a variety of products and services. The virtual classroom courses will be posted on a calendar for users to pre-register and will be offered daily in the morning and afternoon.</p> <p><b>On-Demand/Tutorial Courses</b></p> <p>On-Demand/Tutorial training is available 24X7 on a variety of Verizon products and services. Users simply log-in, turn on the audio and click playback. On demand courses are particularly useful when working hours are not conducive to attending the live, instructor-led training. Recorded trainings will be added on a regular basis to the catalog so users can continue to expand their knowledge on the use of Verizon services.</p> <p><b>On-Site Training</b></p> <p>When appropriate, on-site classes will be available for agencies by submitting a training request to Verizon at least 10 business days prior to the requested date. Classes will be conducted at the customer location for classes with at least 10 students participating. Train the trainer options are also available under the Verizon training program.</p>



Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			Verizon will provide a comprehensive training program for its proposed Telecommunications Management System. Training will include instruction on all facets of the Verizon portal for accessing information on products and services, ordering, billing, repair and trouble ticket information. There will be several classes for users to take online either via instructor-led virtual classes or as on-demand classes.
1.32	The Offeror shall implement an expeditious and seamless transition of services, without unscheduled interruption, from the Commonwealth's current services to those within the scope of this RFP.	Y	
1.33	In coordination with the Commonwealth, the Offeror shall jointly develop the transition plan that includes provisions for tasks and milestones, resource requirements, timelines, and other dependencies required to successfully execute the transition.	Y	
1.34	The Offeror shall provide the Commonwealth with a mutually agreed to Final Transition Plan and Schedule for all aspects of the Contract, including both a comprehensive Network and Security Management Plan and Disaster Recovery Plan.	Y	

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1.35	The Offeror shall provide the Commonwealth with a complete plan for the delivery of all offered services.	Y	
1.36	The Offeror shall allow the Commonwealth to place an emergency or temporary order for service without a minimum service commitment.	Y	
1.37	DATA NETWORK SERVICES		
1.38	Miscellaneous Data Services		
1.39	The Offeror shall provide, as part of its service package offerings, maintenance services that are tiered offerings based on the criticality of the affected location.	Y	
1.40	The Offeror shall provide and describe its professional service offering that includes a dedicated network manager that supports a single large enterprise.	Y	<p>Verizon will provide the Commonwealth network management support with the most flexible solution set available. Verizon offers multiple options to provide network managers or management support of single large enterprises.</p> <p>Depending on the enterprise's requirements, Verizon can provide a range of network management beginning at traditional dedicated support the Commonwealth agencies are familiar with today to cost effective remote access support, which can be subscribed to on a by-project or monthly basis.</p> <p>The dedicated support model provides a full time resource who will work with the individual agency to provide network management services. Verizon remote support can be provided for agencies not requiring a full time resource. These organizations may need assistance on a project or monthly basis with items like routing, switching,</p>

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			<p>wireless LAN, IP convergence, security, remote access, application hosting and disaster recovery solutions implementation or daily operation. All of Verizon network management professional services are requirements driven, which means the Commonwealth agency and Verizon have the ability to create a very specific requirements document. Verizon will use these requirements as a guide to provide the proper level of network manager or consultant.</p> <p>In summary, Verizon has the ability to provide the right network management resource to assist in all of the Commonwealth's needs. This flexible solution can be applied at the right price points to assist the Commonwealth in meeting all of the goals of each agency.</p>
1.41	<p>The Offeror shall provide and describe its professional service offering that includes shared network managers that supports multiple entities.</p>	Y	<p>Verizon will provide the Commonwealth network management support with the most flexible solution set available. Verizon offers multiple options to provide network managers or management support of single large enterprises.</p> <p>Depending upon the enterprise's requirements Verizon can provide a range of network management beginning at traditional dedicated support the Commonwealth agencies are familiar with today to cost effective remote access support, which can be subscribed to on a by-project or monthly basis.</p> <p>The shared support model provides a full time resource who will work with multiple agencies to provide network management services. The ratio of agency networks to network management resource will need to be negotiated depending upon the size (number of nodes) associated with the individual networks managed. Verizon remote support can be provided for agencies not requiring a full time resource. These organizations may need assistance on a by-project or monthly basis with items like routing, switching, wireless LAN, IP convergence, security, remote access, application hosting and disaster recovery solutions implementation or daily operation. All of Verizon network management professional services are requirements driven, which means the Commonwealth agency and Verizon have the ability to create a very specific requirements document. Verizon will use these requirements as a guide to provide the proper level of network manager or consultant.</p> <p>In summary, Verizon has the ability to provide the right network management resource to assist in all of the Commonwealth's needs. This flexible solution can be applied at the right price points to assist the Commonwealth in meeting all of the goals of each agency.</p>
1.42	<p>The Offeror shall provide, as part of its service package offerings, Customer Premises Data</p>	Y	

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	Equipment (CPE) that supports all technologies included in its proposed network solution.																																		
1.43	The Offeror shall provide service package offerings for installation services including demarc extensions to the CPE device, maintenance services, and network management services.	Y																																	
1.44	<i>The Offeror shall describe offered service tiers with graduated levels of service.</i>	Y	<p>The Verizon Solution provides the Commonwealth a flexible and cost effective solution for graduated service options. Based upon the Commonwealth's request, Verizon developed the following tiers of service levels.</p> <table border="1"> <thead> <tr> <th>MANAGEMENT SOLUTION COMPONENTS</th> <th>BRONZE LEVEL</th> <th>SILVER LEVEL</th> <th>GOLD LEVEL</th> </tr> </thead> <tbody> <tr> <td>Proactively monitor the network and isolate faults to the access, network transport or customer premise equipment components</td> <td>Included</td> <td>Included</td> <td>Included</td> </tr> <tr> <td>Restores and repairs any issues with the access and or Verizon circuits.</td> <td>Included</td> <td>Included</td> <td>Included</td> </tr> <tr> <td>Alerts if the issue is customer premise equipment related.</td> <td>Included</td> <td>Included</td> <td>Included</td> </tr> <tr> <td>Control to resolve physical faults on the premise equipment.</td> <td>Included</td> <td>Included</td> <td>Included</td> </tr> <tr> <td>Control to resolve logical faults on the premise equipment.</td> <td></td> <td>Included</td> <td>Included</td> </tr> <tr> <td>REPORTING</td> <td></td> <td></td> <td></td> </tr> <tr> <td>A Health Report is a comprehensive set</td> <td>Included</td> <td>Included</td> <td>Included</td> </tr> </tbody> </table>	MANAGEMENT SOLUTION COMPONENTS	BRONZE LEVEL	SILVER LEVEL	GOLD LEVEL	Proactively monitor the network and isolate faults to the access, network transport or customer premise equipment components	Included	Included	Included	Restores and repairs any issues with the access and or Verizon circuits.	Included	Included	Included	Alerts if the issue is customer premise equipment related.	Included	Included	Included	Control to resolve physical faults on the premise equipment.	Included	Included	Included	Control to resolve logical faults on the premise equipment.		Included	Included	REPORTING				A Health Report is a comprehensive set	Included	Included	Included
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			of reports that leverage historical data. The key features of a Health Report are volume, bandwidth utilization, and "Health" statistics			
			The Proactive Performance Monitoring reporting level: <ul style="list-style-type: none"> <li>▪ includes Standard Reporting Services</li> <li>▪ Provides for in-network latency reports</li> <li>▪ Provides the ability to notify NOC personnel of potential exceptions</li> </ul>			Included
			The ETM reports contain all the features and functionality of the Standard and Proactive Performance Monitoring reports, combined with the following modules: <ul style="list-style-type: none"> <li>▪ Quality of Service / Class of Service (QoS / CoS)</li> <li>▪ Network Based Application Recognition (NBAR) protocol tracking</li> </ul>			Included
			MAINTENANCE OPTIONS			
			Multiple Vendor Maintenance supported	Included	Included	Included
			Certified and trained Field Technicians for key equipment vendors (Cisco, Nortel, Alcatel, Microsoft)	Included	Included	Included
			Field Technicians dispatched by Managed Network Services		Included	Included
			Field Technicians dispatched on-site		Included	Included
1.45	The Offeror shall provide and maintain out of band remote network management	Y				

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response												
	capabilities.														
1.46	<i>The Offeror shall describe its hardware repair and replacement process included in its tiered offerings.</i>	Y	<p>The Verizon maintenance service plan covers internetworking hardware/software equipment with replacement parts and on-site labor for the resolution of problems within the device. Problem determination and resolution are managed by Verizon personnel. In the event maintenance service is required, a technician will be dispatched from a local service location to arrive on-site along with replacement parts for the covered equipment.</p> <p>Verizon will do the following in a good and workmanlike manner:</p> <ol style="list-style-type: none"> <li>1. Use commercially reasonable efforts to isolate any problems with the Equipment and to restore service within the Equipment Mean Time To Repair following receipt of the Commonwealth's notification that the Equipment is inoperative.</li> <li>2. Investigate trouble reports initiated by the Commonwealth and repair or replace any of the Equipment which fails to meet the manufacturer's published operating specifications for the Equipment.</li> <li>3. Before replacing Equipment, Verizon will attempt to contact the Commonwealth to schedule it. The replaced unit will be returned to Verizon inventory at Verizon's expense.</li> </ol> <p>The Verizon Solution provides the Commonwealth a flexible and cost effective solution for graduated service options. Based upon the Commonwealth's request, Verizon developed the following tiers of service levels. Repair and replacement process is included in this response. Verizon provides maintenance programs on leading equipment vendors.</p> <table border="1"> <thead> <tr> <th>MANAGEMENT SOLUTION COMPONENTS</th> <th>BRONZE LEVEL</th> <th>SILVER LEVEL</th> <th>GOLD LEVEL</th> </tr> </thead> <tbody> <tr> <td>Proactively monitor the network and isolate faults to the access, network transport or customer premise equipment components</td> <td>Included</td> <td>Included</td> <td>Included</td> </tr> <tr> <td>Restores and repairs any issues with the access and or Verizon circuits.</td> <td>Included</td> <td>Included</td> <td>Included</td> </tr> </tbody> </table>	MANAGEMENT SOLUTION COMPONENTS	BRONZE LEVEL	SILVER LEVEL	GOLD LEVEL	Proactively monitor the network and isolate faults to the access, network transport or customer premise equipment components	Included	Included	Included	Restores and repairs any issues with the access and or Verizon circuits.	Included	Included	Included
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			Nortel, Alcatel, Microsoft)			
			Field Technicians dispatched by Managed Network Services		Included	Included
			Field Technicians dispatched on-site		Included	Included
1.47	The Offeror shall be responsible for coordination and implementation of software upgrades and repairs for all managed equipment.	Y				
1.48	<i>The Offeror shall describe how it will address local loop failures for all Commonwealth locations.</i>	Y	Verizon utilizes its IMPACT platform to address local loop failures. Integrated Management Platform for Advanced Communication Technologies (IMPACT) is an automated and integrated Rapid Fault Isolation infrastructure. IMPACT provides end-to-end testing of circuit and CPE in parallel and provides real-time notification to the Commonwealth. IMPACT interfaces with internal systems to enable Verizon to proactively detect an outage, perform fault isolation, and initiate repair action in minutes without human intervention. Verizon has created a unique Patent Pending automation that, once a network fault is detected, issues commands in parallel across the backbone through the local loop and out of band to the CPE to isolate the exact failure point. This system provides for the rapid creation of local exchange provider trouble tickets with no human intervention, thereby limiting communication errors and reducing outage time.			
1.49	The Offeror shall as part of its proposed solution should support existing frame relay and ATM connectivity.	Y				
1.50	The Offeror shall prioritize TSP circuits per federal regulations and mark applicable circuits as	Y				

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	TSP within its system, to provide easy identification when a trouble ticket is created.		
1.51	The Offeror shall be responsible to deliver Intrastate and Interstate facilities to the assigned demarcation of the building. This includes residential service and newly built buildings.	Y	
1.52	The Offeror shall provide as part of its services a description and a diagram of the proposed network which must be in Visio format, and must show all systems and circuits through which significant amounts of Commonwealth traffic will pass. This should include all systems managed by the Offeror or its subcontractors.	Y	
1.53	<i>The Offeror shall describe, in detail, any components or services in the proposed network that will not have redundant capabilities or are a single point of failure.</i>	Y	All elements of the proposed Verizon core infrastructure are redundant. Local redundancy is available and would be integrated based on the Commonwealth's needs. If diverse entrances at the local premises are available, Verizon recommends using them where required. Additionally, Verizon has provided backup continuity options for the Commonwealth. Verizon can work with the Commonwealth to build out these capabilities where required.
1.54	<i>The Offeror shall describe capacity planning and management as part of its proposed solution to meet and/or</i>	Y	Verizon's Internal Data Traffic Engineering organization is committed to capacity planning. This organization is responsible for monitoring, capacity planning and traffic engineering the Private IP backbone. This helps ensure that diversity, capacity, and network architecture requirements are met to afford The Commonwealth's Private IP network will perform to the Verizon Private IP Service Level Agreement standards.

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	<i>exceed current and future Commonwealth needs.</i>		<p>Verizon's Private IP Commonwealth Network architecture is built on scalable carrier class routing devices for growth.</p> <p>Verizon utilizes extensive instrumentation and monitoring capabilities to closely monitor network resource consumption. The Private IP Network Daily Health along with various traffic utilization reports are used by the Data Traffic Engineering regional planning team to monitor and track all network resources on a daily basis and take immediate corrective action as soon as any negative trend is identified.</p> <p>Increases in capacity can be driven by not only trended and projected peak utilization growth rates but also network diversity requirements. The Data Traffic Engineering organization utilizes network modeling tools to ensure restorability based on single card failures, node failures and right-of-way or cable (fiber path) system failures.</p> <p>Verizon designs the Private IP backbone to be able to reroute around trunk failures based on the number of trunks that exist out of any given location and the utilization associated with them. For example, when a trunk fails there must be enough capacity on the remaining link(s) to support all the bandwidth previously supported by the failed trunk.</p>
1.55	The Offeror shall ensure its proposed design solution for the Commonwealth allows for the separation of agency traffic.	Y	
1.56	The Offeror shall propose services that are non-proprietary, support open standards, and are interoperable with similar public network offerings.	Y	
1.57	The Offeror shall provide dynamic fault tolerant routing to ensure high reliability in the event of network component or path failures as part of its proposed solution.	Y	

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1.58	All proposed services are interoperable with similar standards based services provided by other vendors.	Y	
1.59	The Offeror shall ensure that its services will not interfere with existing public safety networks or radio systems currently used for air traffic control and analog/digital radio and Public Television Broadcast communications.	Y	
1.60	The Offeror shall notify the Commonwealth when the networks diagram changes.	Y	
1.61	The Offeror shall specify which services being implemented will minimize the impact of a facility failure on the proposed service.	Y	
1.62	The Offeror shall evaluate and recommend the integration of multiple services on common facilities as part of the overall enterprise network architecture.	Y	
1.63	<i>The Offeror shall describe how its proposed network solution will accommodate the Commonwealth's growing</i>	Y	The proposed network infrastructure will easily support any bandwidth requirements for video networking or any other application simply by an increase in bandwidth of the local loop. Ethernet and MPLS technologies have been deployed by Verizon that meet these requirements and eliminate the requirement for higher cost dedicated TDM or SONET

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	<i>bandwidth requirements for video networking.</i>		facilities. The Verizon offering for the Commonwealth network is to use Ethernet access facilities into each high speed location and link these locations together using Verizon's MPLS-based Private IP network. The combination of these two technologies meets the Commonwealth's current requirements and provides a path for any future growth. Additionally, Verizon's Private IP Enhanced Traffic Management (ETM) would be available for a more advanced CoS/QoS offering that would allow the Commonwealth to manage its traffic through six traffic priority classes, thus facilitating prioritization and differentiation of video as well as other priority applications across the Private IP backbone.
1.64	The Offeror shall specify the mean time to repair (MTTR) and the mean time between failures for each network and security component included in its proposed solution.	Y	
1.65	The Offeror shall include the provision of Layer 3 edge equipment as a managed service offering with provisions for a 3-year technology refresh.	Y	
1.66	No throttling of Commonwealth traffic should be permitted across the entire Commonwealth network, and no throttling of traffic of individual agencies which may have data intensive needs. In PPTN's case, for example, growth of high definition production will also likely see an increased demand for mezzanine compressed high	Y	

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	bit rate master and program segment material suitable for additional post production activity. These files may be moved and stored at data rates between 50 Megabits per second and 1.5 Gigabits /per second. The growth of the 1080 progressive production format may even see data rates climb to 3+ Gigabits per second.		
1.67	The Offeror shall present an architecture that is based upon current industry network interface standards that allow newly connected networks the ability to share some of the transport assets of other existing networks (i.e. network-to-network interface (NNI)).	Y	
1.68	<i>The Offeror shall provide a description including components, manufacturer, and type for all equipment for its proposed network.</i>	Y	<p>Verizon's Private IP (PIP) is a Cisco-powered network based on Cisco's implementation of the IETF's RFC 4364bis. PIP uses IP-over-MPLS (Multi-Protocol Label Switching) technology in conjunction with Multiprotocol BGP (MBGP) to deliver IP VPN services to its customers.</p> <p>Verizon's Private IP service is based on Cisco's 10008 ESR and GSR 12816 router platforms. In the United States, the PIP Provider Edge (PE) routers are trunked across a dedicated Cisco GSR 12816-based P-core using OC48/STM16 POS circuits.</p> <p>The Private IP architecture utilizes Cisco 10008 ESR and GSR 12816 routers serving as Provider Edge (PE) routers and GSR 12816's serving as the Provider (P) routers.</p> <p>The Cisco ESR 10008 is utilized as the standard PE device for direct access connections from 56k to OC-3 and Fast Ethernet. The ESR also has gateway trunks</p>

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			(indirect access) established to other Verizon services, such as DSL access networks, Verizon Satellite Network, Verizon VoIP Platform, and traditional Frame Relay and ATM service platforms.  The GSR 12816 is deployed as both a backbone (P-router) and a high speed access PE router for current and future direct access connections that include OC-3 POS, OC-12 POS, OC-48 POS, and Gigabit Ethernet connections.
1.69	Order Management		
1.70	The Offeror shall complete service orders based on the standard order interval for that service defined in Schedule E-1.	Y	
1.71	The Offeror shall provide the estimated network latency for primary and redundant paths on any ordered data services to the requesting Contract Participant to make sure it meets the Contract Participant needs.	Y	
1.72	<i>The Offeror shall describe its ability and approach to provide a GPS reading for latitude, longitude, and elevation to be taken at the point at the facilities point of entry.</i>	Y	For Commonwealth locations in areas not associated with a street address, Verizon will work with the Commonwealth to utilize GPS latitude and longitude information for service address creation. When the service address is verified, the 911 Automatic Location Identification (ALI) record can be created and forwarded to the 911 Database Management Service for load into the 911 database. As orders are processed, the Commonwealth's service address is validated against specific 911 tables to ensure it is properly formatted and will selectively route to the appropriate emergency communication center when required.
1.73	The Offeror shall perform acceptance testing with the contract participant	Y	

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	Commonwealth prior to declaring ready for use. All test results shall be shared with Contract Participants the Commonwealth.		
1.74	The Offeror shall obtain acceptance from the order creator certifying that the work requested on the order was completed to the satisfaction of the requestor prior to billing.	Y	
1.75	Response and Redundancy		
1.76	The Offeror shall react and respond to incidents that are caused by an external provider and/or Offeror and shall notify the Commonwealth of the incidents.	Y	
1.77	The Offeror shall provide environmental requirements and report on any known or discovered temperature and/or power conditions that would impact or have the potential to impact performance.	Y	
1.78	<i>The Offeror shall describe, in detail, all components or services</i>	Y	Verizon's Private IP network implements numerous design rules and best engineering practices to protect against network anomalies that may affect the overall network and ensure network survivability. Redundancy is the most important tool for ensuring

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	<i>in the proposed network that have redundant capabilities.</i>		<p>network survivability.</p> <p>Verizon has explicitly engineered the Private IP network infrastructure to eliminate any single point of failure. All PE and P-core routers are equipped with redundant processor cards and DC power supplies, and dual P-core routers are deployed at backbone node sites. All network elements have back-up battery power and standby electrical generators. All trunking connections are dual homed to diverse routers.</p> <p>Verizon’s circuit consolidation solution includes redundant circuits to Commonwealth locations. These circuits will be provisioned into redundant Private IP PE routers.</p>
1.79	The Offeror shall have the ability to deliver redundant transport services from an alternate service provider.	Y	
1.80	Internet Services		
1.81	The Offeror shall provide the Commonwealth with an Internet access network supported by two different Internet Service Providers (ISP), physically redundant, and geographically diverse. The Internet access network shall be capable of supporting all Commonwealth inbound/outbound traffic and peak traffic at all times.	Y	
1.82	The Offeror shall address all security, management and performance issues associated with the implementation of multiple Internet connections and	Y	

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	multiple ISPs.		
1.83	The Offeror shall provide Internet connections that provide redundancy and fail over.	Y	
1.84	The Offeror shall provide its broadband Internet solutions.	Y	
1.85	<i>The Offeror shall describe its broadband Internet solutions.</i>	Y	<p>Verizon is able to provide Broadband Internet connectivity via several methods depending on the Commonwealth’s requirements. These methods include Internet Cable; Internet DSL – Office; Internet DSL – Solo; and for locations that are not able to obtain Internet connectivity from either cable or DSL, Verizon can provide Broadband Internet connectivity via Verizon Wireless VZAccess.</p> <p>Verizon Internet Cable services provide reliable, high-bandwidth communications using circuits installed by Internet Cable providers. For remote workers and small branch offices, where leased-line costs would be difficult to justify, cable enables rich, multi-media communication, including voice, video, and high-speed access to information and LAN resources.</p> <p>Internet Cable provides asymmetric bandwidth of 768 Kbps to 1.5 Mbps downstream in select markets nationwide. The service is well-suited as a complement to DSL services and can provide additional coverage in large, multi-site applications or in locations where DSL is not available.</p> <p>The service includes these features:</p> <ul style="list-style-type: none"> <li>▪ Static IP addresses</li> <li>▪ Bridged CPE</li> <li>▪ Professional, on-site installation</li> <li>▪ Service Level Agreements.</li> </ul> <p>Internet DSL services provide reliable, high-bandwidth communications using standard copper telephone lines. For remote workers and small branch offices, where leased-line costs would be difficult to justify, DSL enables rich, multi-media communication, including voice, video, and high-speed access to information and LAN resources.</p> <p>Internet DSL - Office services use Symmetric DSL (SDSL and IDSL) technology to deliver a consistent upload and download speed for office and multi-user applications. The circuits are engineered for consistent performance, which is supported by SLAs.</p> <p>Internet DSL - Office is a multi-user business solution, designed to provide the</p>

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			<p>Commonwealth with a business-class Internet DSL service using DSL local loop technology as the last mile to deliver access to Verizon's IP backbone.</p> <p>The service offers a DSL router, multiple static IP addresses, domain name registration and DNS services, multiple bandwidth options, as well as other features to help tailor the service to the Commonwealth's specific needs.</p> <p>VZAccess extends the mobile workforce by providing wireless Internet access solutions. VZAccess provides access to business-critical data and applications whenever users are away from the office. With VZAccess services, employees can stay connected while traveling, at remote locations, in the field, or anywhere on the Verizon Wireless reliable, nationwide data network.</p>
1.86	The Offeror shall provide the Commonwealth with Internet Access Network Statistics for average inbound/outbound traffic and peak traffic for each billing period.	Y	
1.87	<i>The Offeror shall describe its Internet 2 connection offering to the State System of Higher Education (SSHE). Currently there is a 100MB Ethernet Point to Point connection from Drexel University to the West Chester NOC.</i>	Y	<p>Verizon will provide to the Commonwealth an Ethernet Point-to-Point 100M connection between Drexel University and West Chester. Verizon Ethernet Private Line (EPL) service utilizes Ethernet over Synchronous Optical Network (SONET) technology to provide dedicated point-to-point Ethernet connectivity between two locations. EPL circuits provide a reliable solution for the Commonwealth, which requires high-speed low latency and secure Ethernet wide area network (WAN) connectivity. A unique component of the EPL value proposition is its ability to provide the resiliency and performance necessary to support mission-critical and latency-sensitive business applications. The scalability of EPL will also allow the Commonwealth to purchase the bandwidth needed today and then increase the network bandwidth as business needs increase. Consequently, the Commonwealth does not have to pay for more than needed.</p>
1.88	The Offeror shall provide separate Internet domains for Contract Participants utilizing Commonwealth assigned IPv6 address space.	Y	

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1.89	The Offeror shall offer tiered level of billing for the Commonwealth's Internet access network with quarterly billing adjustments to occur based on bandwidth usage trends.	Y	
1.90	IP Address Services		
1.91	The Offeror shall support all data communication protocols in use within the Commonwealth.	Y	
1.92	The Offeror shall support the existing Commonwealth IPv4 address space and RFC 1918 IP address configurations in conjunction with existing Network Address Translation.	Y	
1.93	The Offeror shall provide and maintain a current, dated network diagram, including IP addresses to be available for review. The Offeror shall notify the Commonwealth when a change to the diagram occurs.	Y	
1.94	The Offeror shall provide an IPV6 strategy which includes enterprise migration plan from IPv4 to IPv6.	Y	

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1.95	The Offeror shall provide an infrastructure that supports IPv6 and IPv4.	Y	
1.96	<i>The Offeror shall describe how it will implement IPv6 utilizing Commonwealth owned IPv6 addresses.</i>	Y	<p>Verizon has a long history and experience implementing and providing IPv6 solutions. Verizon is a pioneer in developing and delivering IPv6 capabilities to the market. In the mid-1990s, Verizon (as the former MCI) developed a high-speed network called vBNS (very high performance backbone network service). This network, which later evolved to vBNS+, was one of the first to deploy IPv6 in 1998, and became the second network in North America to be allocated production IPv6 address space from the American Registry for Internet Numbers (ARIN) to be used for live production traffic. Today, U.S. government agencies can use the vBNS+ network to transport IPv6 traffic.</p> <p>vBNS+ provides IPv6 service through separate IPv6 routers. This service offers both native IPv6-over-ATM connections and tunneled IPv6-in-IPv4 connections. Native IPv6 connections for sites that already enjoy ATM connectivity for IPv4 are implemented by building new IPv6-router-to-IPv6-router PVCs in the existing Permanent Virtual Paths (PVP). Verizon will leverage this experience to provide the Commonwealth assistance with implementing IPv6 address into their network.</p> <p>Verizon will work with the Commonwealth to best plan, implement and maintain network services leveraging IPv6 address space. Verizon will first engage the Commonwealth design resources in a discovery process which can include identifying where to leverage IPv6 addresses, gateways and tunnels if necessary. The discovery process would lead to a detailed statement of work and project management time line. This plan can and will include the Office of Administration and agency level design. Verizon would request the Commonwealth to validate/approve the design and project plan. Finally, Verizon would then be able to provide multiple resources to help successfully complete the project. These could include project managers, design engineers and field technicians to complete the work. Verizon's experience with implementing large projects and prior experience with delivering IPv6 based network services will provide the Commonwealth a flexible and successful IPv6 implementation plan.</p>
1.97	The Offeror shall support and enable IPV6 on all managed devices as requested by the Commonwealth.	Y	

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1.98	<i>The Offeror shall describe its ability to establish a dedicated IPv6 native mode (not tunneled) 9Mbps Internet connection separate from the Commonwealth's production network. The access type should be unchannelized DS3. The Commonwealth intends to create and manage its own test bed environment in Harrisburg that would in no way impact its production network or consume bandwidth resources from the Commonwealth's enterprise Internet connection.</i>	Y	Verizon has the capability to provide IPv6 native mode to the Commonwealth from either the Pittsburgh Internet point of presence or Philadelphia Internet Point-of-Presence. Verizon is also capable of providing the IPv6 via a 9Mbps unchannelized DS3 or 10Mbps Ethernet.
1.99	MPLS and QOS		
1.100	The Offeror shall provide an infrastructure that supports Multi-protocol Label Switch (MPLS).	Y	
1.101	<i>The Offeror shall describe how it will implement MPLS.</i>	Y	Verizon's Private IP (PIP) service is based on RFC 4364, which describes a method by which a Service Provider (SP) may use an IP backbone to provide IP VPN (Virtual Private Network) services for its customers. In the case of PIP, the VPN service is provided across a closed private IP infrastructure. This private infrastructure is totally secure. The Commonwealth's internal traffic will never touch the public Internet.  Verizon's Private IP multi-protocol label switching (MPLS)-based Virtual Private Network (VPN) provides routing separation and privacy as traffic travels through the backbone between Commonwealth sites. Each VPN on the Private IP backbone has its own virtual

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			<p>routing and forwarding (VRF) table in Verizon's Provider Edge (PE) devices, so any network or site that belongs to a VPN is provided access only to the set of routes contained within that table. Effectively, a number of virtual routers are created in a single physical router that addresses the data between the Customer Edge (CE) to the Verizon Provider Edge (PE).</p> <p>This VRF capability can be extended into the Commonwealth's CPE utilizing a technology called VRF Lite. VRF Lite allows distinct security zones to have a virtual connection to Private IP. This enables the Commonwealth to consolidate security zones with multiple circuits on two redundant circuits into the appropriate Private IP VPN.</p>
1.102	The Offeror shall support and enable MPLS on all managed devices as requested by the Commonwealth.	Y	
1.103	The Offeror shall support and enable Quality of Service (QOS) on all managed devices as requested by the Commonwealth.	Y	
1.104	The Offeror shall support QOS capabilities.	Y	
1.105	The Offeror shall provide a QOS strategy.	Y	
1.106	Voice Over IP (VOIP)		
1.107	The Offeror shall provide a locally hosted IP telephony solution that is compatible with the Department of Health's VOIP telephones. Additionally, the Offeror shall provide a web-	Y	

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	based administrative/management platform to administer and manage the VOIP phones.		
1.108	<i>The Offeror shall describe a centralized VOIP solution and/or CO based IPT solution that presents a clear direction and progression to reach convergence either beginning with initial transition and/or migration over time.</i>	Y	<p>Verizon offers the full gamut of VoIP solutions from host based enterprise solutions to on-premises customer IPT solutions.</p> <p>Hosted IP Centrex is designed for agencies that want all the features of a PBX or Key system without the associated capital, lease, or maintenance costs. All the PBX functionality resides in the Verizon network. It is an ideal solution when moving to or establishing a new location, or when looking to replace an outdated PBX or Key system. Hosted IP Centrex is a complete turnkey solution including design, installation, and ongoing maintenance. Verizon's network-based IP technology also provides a full suite of subscriber and administrative features.</p> <p>The Verizon VoIP solution is based on packet switching, which carries voice traffic more efficiently than traditional circuit switching. Compression further reduces bandwidth requirements to allow more voice calls over the same network, while maintaining service quality. Dynamic bandwidth allocation intelligently apportions the network to manage both voice and data traffic, thereby ensuring the full T1 is available for data when needed.</p> <p>Verizon VoIP service will work with the Commonwealth's existing PBX equipment or new SIP-enabled (Session Initiation Protocol) phones while utilizing the feature/functionality of the Verizon network infrastructure. There are many ways to deploy this technology and Verizon has the knowledge and experience to adapt to each unique aspect of the Commonwealth agencies.</p> <p>Verizon's initial plan is to deploy Hosted IP Centrex to the Department of Health to replace the service that is currently in use. We have also identified a number of additional locations where we believe that either an IP Centrex or a Hybrid environment would be immediately beneficial to the Commonwealth. Verizon will work with the technical staff at the various agencies and offices to prioritize the rollout of VoIP at the agencies pace.</p>

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1.109	The Offeror's proposed VOIP or telephony solution shall utilize industry standard encryption technologies according to NIST guidelines	Y	
1.110	COPANET		
1.111	The Offeror shall utilize the campus network (the COPANET) equipment as part of its proposed network solution for the Commonwealth.	Y	
1.112	The Offeror shall assume responsibility for management, monitoring and maintenance of the COPANET.	Y	
1.113	The Offeror shall manage and maintain the Commonwealth's laboratory environment for the COPANET.	Y	
1.114	As part of the COPANET management, monitoring and maintenance, and with the Commonwealth's concurrence, the Offeror shall implement system patches and upgrades as they become available.	Y	

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1.115	As part of the COPANET management, monitoring and maintenance the Offeror shall utilize existing Cisco Smartnet (equipment support and replacement) contract and open problem tickets on the Commonwealth's behalf for problem resolution.	Y	
1.116	As part of the COPANET management, monitoring and maintenance the Offeror shall provide the Commonwealth network management access passwords and web portals to provide view-only access to the element management system for network and nodal status.	Y	
1.117	As part of the COPANET management, monitoring and maintenance, at the Commonwealth's request, the Offeror shall provide management services to remotely provision the movement of existing circuits between nodes and ports, provision the addition of new circuits in the network or change circuit configurations within the limits of the hardware available.	Y	

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1.118	As part of the COPANET management, monitoring and maintenance the Offeror shall monitor for alarms and performance issues with the manufacturer's element management system (Cisco CTM) and take action to notify the Commonwealth, analyze the data and respond consistent with the manufacturers recommendations and Commonwealth telecommunications standard practices.	Y	
1.119	The Commonwealth will provide the Offeror with two Cisco ONS 15454 and two Catalyst 6504 devices, with appropriate components for the use as the COPANET lab equipment. The Offeror shall provide the Commonwealth access to the equipment to participate in testing.	Y	
1.120	The Offeror shall utilize the lab equipment as part of the Offeror's COPANET sparing plan. The Offeror shall utilize the Commonwealth's equipment	Y	

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	maintenance contract for replenishment of COPANET lab equipment.		
1.121	The Offeror shall locate the COPANET lab equipment at an appropriate facility within the Harrisburg metropolitan area. If the Offeror proposes an alternate location for the COPANET lab equipment they shall have the equivalent spare parts available within the Harrisburg metro area at its cost.	Y	
1.122	The Offeror shall provide emergency repair service in the event of an incident that causes a break or disturbance to the Commonwealth owned single and multimode fiber in the Harrisburg area. Offeror must have at its disposal a truck or trailer equipped for fusion splicing, as fusion splicing will be required for all repairs and all repairs will have to pass re-certification after repair. The Offeror shall be required to determine cause and responsibility for a break in Commonwealth owned fiber.	Y	

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1.123	Network Operations Center		
1.124	The Offeror shall provide a Network Operations Center (NOC) for the delivery of all Commonwealth telecommunications services.	Y	
1.125	<i>The Offeror shall describe in detail its NOC.</i>	Y	<p>Verizon maintains and operates numerous Network Operation Centers (NOCs) that are aligned with its products and services. Each NOC is equipped with state-of-the-art monitoring and trouble resolution tools and is staffed with resources that are knowledgeable in and experienced with the specific services being proposed. The Verizon solution for the Commonwealth provides an overall Help Desk that serves as the single point of contact, as well as NOCs that service the data, voice, and security solutions.</p> <p><b>Dedicated Help Desk</b></p> <p>Verizon is providing a dedicated Tier 1 Help Desk, located in Pennsylvania, which will serve as the Commonwealth’s single point of contact for all issues with Verizon’s services. Each of the agents will be trained in the products and services Verizon is providing and will perform basic troubleshooting and triage of Commonwealth issues. In order to facilitate the rapid resolution of problems, Commonwealth-specific scripts will be developed that will enable Verizon’s agents to resolve basic issues and accurately identify the proper NOC to engage if additional expertise is required.</p> <p>For example, if the Commonwealth were to call in with a network connectivity problem, Verizon’s Help Desk agents would isolate the problem, determine if it is a managed device or network issue, and engage Verizon’s Managed Network Services NOC for resolution. The Help Desk will then monitor the issue to help ensure that the proper resources are engaged, provide status back to the Commonwealth, and escalate to the proper management resource if required. Similar support will be provided for the voice and security services.</p> <p>The Verizon Help Desk will be equipped with a dedicated Remedy trouble ticketing and tracking system. This system will serve as the point of interface with the Commonwealth’s Remedy system and will be e-bonded with Verizon’s internal trouble ticketing systems. The Help Desk Remedy will provide a single view into all trouble</p>

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			<p>tickets, providing the Help Desk agents, the Program Management Office, and the Commonwealth a holistic view of the entire solution.</p> <p>This view will enable Verizon to correlate troubles, identify chronic problems, and offer continuous service improvements over time.</p> <p><b>Network Management Services</b></p> <p>At the core of Verizon's Managed Services infrastructure is its state-of-the-art Integrated Management Platform for Advanced Communications Technologies (IMPACT) toolset. IMPACT is a real-time monitoring and control system. The system implements both a modular software and hardware design to accommodate expansion of network operations and monitoring. Information is processed and stored using object technology, XML data modeling and incorporates industry standards, such as ITUT M.3100. The system notifies operations personnel in real time of incidents occurring in Verizon's global network spanning transport, switching, data, IP, DSL and hosted services technologies.</p> <p>IMPACT provides greater supervision of the network through a highly flexible, distributed design with survivable system implementation, which incorporates the best-of-breed, off-the-shelf technologies integrated within a sophisticated manager of manager's architecture. IMPACT utilizes communications bus architecture for distributed system component communications and an IP-based internal telemetry network for access to network equipment.</p> <p>In support of proactive network management and monitoring, Verizon's MNSO uses technology provided by Systems Management Arts, Inc. (SMARTS): Service Assurance Manager (SAM), and AM (Availability Manager) Knowledgebase. The SMARTS platform consolidates views from multiple management domains into a user-friendly interface for MNSO personnel.</p> <p>Once a problem is identified, the MNSO engineer opens a trouble ticket in Enterprise Trouble Management System (ETMS), and Verizon responds to alerts/ alarms based on pre-established procedures agreed to by the customer and Verizon.</p> <p>Utilizing the correlation engine within SMARTS, Verizon has the ability to quickly correlate multiple alarms to a single root cause within the Commonwealth's network. Furthermore, by layering the workflow device servers and correlation engines within IMPACT on top of SMARTS as the umbrella architecture, alarms are correlated from customers' networks to other elements within Verizon's network, such as the following:</p> <ul style="list-style-type: none"> <li>▪ SONET backbone</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Digital Cross-Connects (DXCs) used to route the circuit across the network</li> <li>▪ Muxes used to aggregate and separate circuits</li> <li>▪ Virtual Networks, such as the Frame Relay, ATM, Internet and Private IP networks.</li> </ul> <p>The IMPACT architecture will also correlate Commonwealth network outages against the change management platform to ensure no planned outages are causing loss of communications to the device. Once the alarm correlation process has completed and no identified planned maintenance or backbone event has been related to the failure, IMPACT moves the fault to the troubleshooting and isolation phase. The entire SMARTS/IMPACT process averages 11-13 minutes from initial alarm presentation/recognition to completion of the IMPACT process. This includes fault recognition, correlation, interrogation, testing, documentation, and customer notification.</p> <p><b>COPANET Management</b></p> <p>Verizon will monitor and manage the COPANET network utilizing the services of its subcontractor, Fujitsu (FNC). The FNC NOCs provide a full range of 24x7x365 proactive network fault and performance monitoring features with connection services offered for transport network elements and public-access equipment. Management Systems support the collection of messages from equipment that provides standards-based TL1 and SNMP data protocols.</p> <p>Over the past 20 years, FNC has been involved in many large and complex projects covering nationwide networks spanning multiple states and hundreds of network nodes for both Fujitsu-manufactured products and other equipment manufacturers' products. FNC has provided installation, test and turn up, on-going maintenance and NOC services for these devices. The engineers monitoring the networks are specifically qualified for the equipment being monitored. Full redundancy is provided in FNC's NOC, so that failure of any one data link, or facility, will not interrupt NOC operations.</p> <p>With over 200 years of combined experience in the telecom industry, the NOC staff is highly capable and competent. FNC Engineers carry various industry-recognized certifications, including Cisco CCNA, CCNP, and CCIE.</p> <p>For the last eight (8) years, FNC has provided NOC coverage for Wireless, DWDM and SONET devices located in Texas, New York, California, Illinois, Florida, New Mexico, New Jersey and Guam. This includes managing advance hardware replacement and on-site support, either directly, through a third party or the Cisco SmartNet hardware and on-site services on behalf of FNC customers.</p> <p>FNC is ISO 9000 certified and meets the highest quality standards from manufacturing its products to providing support to its customers throughout the product lifecycle. This</p>

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			<p>level of quality is also extended to OEM products FNC support. FNC is currently certified with the ISO 17799 security certification and is working towards the ISO 27002 certification.</p> <p><b>Managed Security Services</b></p> <p>Verizon provides security services to seven Commonwealth agencies today. Since the security infrastructure is in place, these agencies will not be subject to transition activities. Also, Verizon can add new agencies to the current security infrastructure as they are ready.</p> <p><b>Security Operations Centers</b></p> <p>Verizon’s proposed security solution includes 24x7x365 coverage via two US-located Security Operations Centers (SOCs) being provided via Verizon’s security services subcontractor, Integralis. Integralis has five SOC’s distributed in the following global locations:</p> <ul style="list-style-type: none"> <li>▪ Hartford, Connecticut, USA</li> <li>▪ Aliso Viejo, California, USA</li> <li>▪ Singapore</li> <li>▪ United Kingdom</li> <li>▪ Germany</li> </ul> <p>To meet the domestic requirements of the Commonwealth, the Hartford, CT and Aliso Viejo, CA SOC’s will provide the following coverage: the Hartford SOC will provide 7 AM to 7 PM coverage. The Aliso Viejo SOC will cover all remaining hours during each 24-hour period.</p> <p>Commonwealth agencies will have a wide range of requirements for Managed Security Services. Verizon will deliver a portfolio of managed service offerings to defined Service Levels, all of which are managed and maintained using SOC’s and a proprietary managed services platform—Integralis Security Information Service (ISIS). A choice of different service levels helps to ensure that agencies can maintain ownership over security devices to whatever level is most appropriate, given their individual circumstances.</p> <p>These SOC’s are fully redundant and resilient to any single point of failure. Resilience has been achieved through considerable attention to detail, including the use of redundant networking and hardware, and proactive.</p>

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			<p>ISIS is the proprietary managed services platform. Along with the deep expertise of the security team and its strong processes and best practices, ISIS is a key component of the proposed world-class monitoring and managed security services.</p> <p>ISIS was designed, developed and built based on years of the team's experience working with managed security systems. ISIS includes a powerful data intelligence engine that effectively and efficiently delivers event correlation from a full suite of managed devices.</p> <p>This built-in intelligence provides detailed reports and analysis that can be accessed via a Web-based portal. ISIS delivers a new level of reporting that can identify IP addresses that have generated attacks over long periods of time, across broad geographies, devices and customers.</p> <p><b>Managed Voice Services</b></p> <p>Verizon's Network Management Centers are broken down into three major areas. The Transmission Performance group is primarily focused on all aspects of managing Verizon's extensive long distance transmission network. The Switch and Systems Support group manages both the physical switch fabric as well as the logical traffic flow across Verizon's domestic and international voice networks. The local services network management center has combined responsibilities for Verizon's local transmission and switch networks.</p> <p>The objective of all groups in network management, through proactive maintenance and monitoring, is to resolve troubles before the customer recognizes there has been a problem. Achieving this objective results in reduced alarms in the network and quicker resolutions of troubles. Proactive maintenance and monitoring are designed to reduce the number of major outages as well, because the problems are often caught in the developmental stages.</p> <p>Network Management is staffed twenty-four hours a day, 365 days a year, thereby helping to ensure that problems can be handled at any time they occur. The Network Management Centers are also self-sustaining with uninterruptable power systems as well as dual generator backup. Power is dually fed to the centers from two power substations. The centers are also located on SONET fiber rings and tied to two voice switches for full survivability.</p> <p>Verizon has always conducted proactive monitoring on an individual case basis, but now have created a specialized department and hired an entire team of people dedicated to proactive monitoring and to meeting service objectives.</p>

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			<p>The Network Event Management Department (NEMD) is responsible for notifying customers impacted by planned maintenance on networks.</p> <p>Long Distance customers are notified by an automated fax and/or e-mail generated by Scopus approximately one week prior to the maintenance activity. If fax or e-mail contact information is unavailable for a Commonwealth agency, NEMD will contact the account team or the agency by telephone, verify the appropriate contact information for future use, and update Scopus.</p> <p>Customer trouble histories are maintained, and trending analysis is performed at both the system and circuit levels on an ongoing basis. This enables Verizon to identify trends and isolate problems to a common source for correction.</p> <p>Each Verizon Local Switching Hub is staffed by maintenance and operations personnel. In addition to installing and maintaining local services, these personnel monitor equipment and alarms and assist in repairing major outages.</p> <p>Verizon monitors and analyzes the status of the switches, digital cross connect equipment and voice mail equipment; alarms at the switch sites, including fire detection, HVAC, and primary/secondary power; and network elements in the SONET rings. A team of professionals is available 24x7x365 to assist the Commonwealth with local repair.</p>
1.126	The Offeror shall perform the following for network monitoring and management: network and fault management, performance management, maintenance, report management, and operations and problem tracking.	Y	
1.127	The Offeror shall ensure its NOC is fully staffed and operational 24x7x365.	Y	
1.128	The Offeror shall perform remote monitoring from a centralized	Y	

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	location on a twenty-four-hour-per-day, seven-days-per-week, 365-day-per-year ("24x7x365") basis for availability and threshold exceptions.		
1.129	The Offeror shall perform network utilization monitoring and make it accessible to the Commonwealth.	Y	
1.130	The Offeror shall provide a real time monitoring system that allows for historical tracking of network related problems and equipment failures to facilitate proactive network management and make it accessible to the Commonwealth.	Y	
1.131	The Offeror shall have the capability to perform on-demand, detailed data capture and analysis with a suite of network tools.	Y	
1.132	The Offeror shall perform network packet decoding for troubleshooting network performance.	Y	
1.133	The Offeror shall, as part of its network management services, have the ability to generate alerts or simple network management	Y	

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	protocol (SNMP) traps and forward them to selected Commonwealth personnel via email.		
1.134	The Offeror shall work closely with Commonwealth LAN administrative staff to resolve WAN/LAN configuration and performance issues.	Y	
1.135	The Offeror shall perform trend analysis as it relates to network performance and outages for services provided throughout the Commonwealth regardless of Contract Participant.	Y	
1.136	The Offeror shall perform trend analysis as it relates to capacity planning and capacity management.	Y	
1.137	<i>The Offeror shall describe how network thresholds or saturation levels will be determined.</i>	Y	<p>Verizon has made a strong commitment to the PIP Network in keeping capacity ahead of demand and sales. Many levels of planning are all coordinated in International Network Engineering. All planning is integrated, as each section impacts the other plans. Traffic driven capacity augments are based on trending growth and bids versus estimated activation time for the market to keep traffic below 40% utilization on each trunk at a standard access node. The augment is complete before traffic reaches <b>40%</b> utilization on each trunk, with an absolute network limit of 50% on each of the two access trunks. The details behind Verizon's Capacity Planning for the Data Network include:</p> <ul style="list-style-type: none"> <li>▪ Platform Plans (Hub and access design, Ethernet access, OSPF costs, and NNI connections to Frame Relay, SIG, ATM, and MPLS partners)</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Maintenance Plans (Upgrades because of improved CISCO cards, new cable routes for lower latency and costs, new access requirements, and )</li> <li>▪ Equipment Plans (Port Utilization monitored and new cards ordered. New nodes complete install before port utilization reaches 75% of the node capacity)</li> </ul> <p>Planning is based on Statistics, Transmission, and reports</p> <ul style="list-style-type: none"> <li>▪ Statistics come from CISCO reporting, secondary polling, and network telemetry sources all storing 5-15 minute statistics in reporting servers and consolidating into daily reports.</li> <li>▪ Statistics are evaluated for port capacity, utilization, latency, and optimum routing</li> <li>▪ Reporting is 24/7 and monitors all issues needing immediate action (card &amp; trunk outages)</li> <li>▪ PIP Engineering provides daily statistics/status reports for the network.</li> <li>▪ These summary reports are reviewed daily for issues and weekly for utilization.</li> </ul> <p>Monthly Reports are produced for Internal Review</p> <ul style="list-style-type: none"> <li>▪ Planning Nodes, Cards, Transmission, Partners, OSPF, and Project management all within the same organization improves coordination and guarantees that all processes are being followed by the entire group as a whole.</li> <li>▪ Statistics are created for port capacity, utilization, and latency and posted on internal web for group evaluation. Utilization is reported as peak, provisioning, and average.</li> <li>▪ All engineers working on the network are able to see the current status and step plans.</li> </ul> <p>Report generation confirms data analysis and keeps all team members focused.</p>
1.138	The Offeror shall provide an auto-discovery tool to ensure the managed network devices are identified and included in the network inventory.	Y	
1.139	The Offeror shall provide the Commonwealth with the capability to view real-time network up/down status as well	Y	

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	as access to the help desk trouble ticketing system for maintenance activity.		
1.140	The Offeror shall generate network reports that provide the ability to perform review and analysis of statistics.	Y	
1.141	Technology Refresh for Data Networks		
1.142	The Offeror shall provide end-to-end data circuit connectivity for all circuits/services terminated on a demarcation (that includes extended demarcation) including installation, comprehensive testing, maintenance, and problem resolution.	Y	
1.143	The Offeror shall provide point-to-point, two wire and four wire services.	Y	
1.144	The Offeror shall ensure that basic digital transport facilities are available at a wide range of bandwidth levels.	Y	
1.145	The Offeror shall provide inter-city and metro point-to-point, and point-to-multi-point Ethernet services.	Y	

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1.146	The Offeror shall provide Ethernet solutions as part of its proposal.	Y	
1.147	<i>The Offeror shall describe wireless service offerings that include: WiFi, WiMAX and wireless LAN.</i>	Y	<p>Verizon offers multiple products and services for WiFi, WiMAX and wireless LAN. The following are standard product offerings provided by Verizon. Additionally, Verizon offers custom CPE and services solutions through its Professional Services offering.</p> <p><b>Product:</b>  <b>Managed Wireless LAN</b></p> <p><b>OVERVIEW</b></p> <p>Verizon's Managed Wireless LAN service broadens and extends Managed Network Solutions (MNS) capabilities beyond the traditional wired network infrastructure to include secure wireless LAN access. The solution would enable the Commonwealth to leverage Verizon's technical expertise in design, planning, implementation, and network management, thereby allowing deployment of secure wireless networking access within the enterprise. Customers can monitor their managed network through real-time reporting capabilities, providing information on usage, coverage, security, performance, and capacity. Additionally, a customer portal is a standard feature that enables real-time tracking of the managed service implementation process, project status, inventory tracking, contacts, change management requests, and trouble tickets.</p> <p><b>Product:</b>  <b>Site Survey – Wireless WAN Assessment</b></p> <p>Verizon will provide an evaluation of a proposed Commonwealth location for its suitability for installing CPE and/or network services.</p> <p>Typical tasks include the following:</p> <ul style="list-style-type: none"> <li>▪ Determine Verizon Wireless coverage</li> <li>▪ Measure and test signal strength and FTP throughput</li> <li>▪ Determine if an antenna is needed.</li> <li>▪ Determine what cabling/inside wiring is needed from router location to proposed antenna placement for best signal reception</li> </ul>

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			<p><b>Product:</b></p> <p><b>VZAccess</b></p> <p>VZAccess extends the mobile workforce by providing wireless Internet access solutions, thereby providing access to business-critical data and applications whenever employees are away from the office. With VZAccess services, employees can stay connected while traveling, at remote locations, in the field, or anywhere on the reliable, nationwide Verizon Wireless data network.</p> <p>VZAccess Includes the following:</p> <ul style="list-style-type: none"> <li>▪ <b>NationalAccess</b> - NationalAccess provides speeds of 60-80 Kbps on average. The service is available coast to coast and utilizes CDMA 1xRTT technology. In addition, roaming is available in Canada and Mexico.</li> <li>▪ <b>BroadbandAccess</b> - BroadbandAccess provides about 400-700 Kbps downstream on average (EVDO Rev. A offers typical speeds of up to 1.4M downstream). Verizon Wireless' growing, high-speed network covers more than 202 million people in 242 major metropolitan areas and 180 primary airports in the United States. In those areas where EVDO Rev 0 or EVDO Rev A are not available, BroadbandAccess-capable devices will "fall back" to NationalAccess service, including in Canada where roaming is offered. The offer includes both a PC card and a built-in option.</li> <li>▪ <b>BroadbandAccess Connect</b> - BroadbandAccess Connect is available to PDA and Blackberry users who wish to "tether" their device to their laptop for use as a wireless modem, using a USB cable.</li> <li>▪ <b>BroadbandAccess Wireless Router</b> - The BroadbandAccess Wireless Router option provides a low-cost solution for businesses that need to maintain connectivity in the event their primary wireline data connectivity fails. A low monthly fee includes up to 40 megabytes of usage, with a per-megabyte fee for additional usage. Service is available throughout the BroadbandAccess and NationalAccess coverage area.</li> </ul>

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			<div> <p>The diagram illustrates a network architecture for remote access. On the left, 'Remote Workstations or Devices' (represented by a laptop and server icons) are connected to a 'Wireless Router'. A dashed green line labeled 'Point to Point VPN' connects the router to a yellow cloud representing 'Verizon Wireless Networks (1x and EVDO)'. This cloud is connected to a white cloud representing 'Frame, Internet, VPN', which in turn connects to a 'Corporate Network' (represented by a router and laptop icons).</p> </div> <p>The ability to connect anywhere anytime affords users both flexibility and maximized productivity. Verizon Wireless offers remote access via the NationalAccess, BroadbandAccess, and BroadbandAccess Connect services, a wide-area mobile access solution providing both coverage and speed when and where it is needed the most.</p> <p><b>Product:</b>  <b>Wireless Backup</b>  <b>Overview</b></p> <p>Verizon and Verizon Wireless have come together to provide an advanced wireless backup solution to meet customers' business needs. Now, a trusted source can offer customers solutions for all of their wireline and wireless requirements, a partner that can offer the depth and breadth of local-to-global wireline capabilities, plus America's most reliable wireless network.</p> <p>Wireless Backup provides an affordable and reliable high-speed backup connectivity method for remote business locations that rely on broadband wireline services such as DSL or cable. By leveraging the diversity and reach of the Verizon Wireless network, this solution can provide protection against a variety of service disruptions. When wireline service becomes unavailable, customer data is automatically rerouted over the Verizon Wireless data network at broadband speeds. When landline service is restored, data is routed back to the original connection.</p>

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			<p><b>Product:</b>  <b>Wireless Broadband Customer Self-Implementation</b>  <b>Overview</b>                      The Wireless Broadband Customer Self-Implementation solution presents the opportunity for the Commonwealth to establish a diverse alternative broadband access method to traditional wireline services, such as DSL or cable.                      Customers may need high-speed connectivity for a backup to wireline access methods or for access in business locations that do not have wireline access available. The combination of Evolution Data Optimized (EVDO) service from Verizon Wireless and the Cisco 3G Wireless WAN High Speed WAN Interface Card (HWIC) facilitates such a solution.</p> <p><b>Product:</b>  <b>Private IP Satellite</b>  <b>OVERVIEW</b>                      Private IP Satellite service couples Verizon's robust two-way satellite network with Verizon's Private IP backbone to deliver satellite access services in the United States (including Alaska and Hawaii) and the territories of the U.S. Virgin Islands and Puerto Rico.                      The service provides an additional means to interconnect customer locations to Private IP, thereby allowing customers to utilize broadband IP connectivity at virtually any location within the satellite coverage area. Private IP Satellite service is able to reach areas where DSL may not be available, or where T1 circuits are cost prohibitive. Additionally, customers may utilize Private IP Satellite service as a physically redundant connection, serving as a backup to their terrestrial circuit.</p> <p><b>Product:</b>  <b>Private IP Wireless Access</b>                      To assist customers requiring a wireless private connection to the Verizon Private IP (MPLS) network, Verizon offers Private IP Wireless Access. This service provides an effective broadband connectivity solution to customer remote locations in all 50 states, provided there is sufficient wireless (cellular) signal strength.</p>

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			<p><b>Note:</b> The wireless data technology used by Verizon Wireless is CDMA 1xEVDO, or more commonly known as EVDO (Evolution Data Optimized). It allows for broadband data communication over a wide area mobile network at speeds comparable to a DSL connection.</p> <p><b>Verizon Wireless Technology Roadmap</b></p> <p>Verizon Wireless has invested over \$48 billion in its network to increase coverage and capacity and to introduce new services. Currently, the high-speed wireless network is based on EV-DO Rev. A technology, and Verizon Wireless will continue to invest in and deploy Rev. A as it builds out its 4G network as an overlay to 3G. The Verizon Wireless 3G technology offers typical download speeds of 600 Kbps-1.4 Mbps.</p> <p>The Long Term Evolution (LTE) technology selected for the 4G platform will deliver higher speed and throughput performance and reduced latency for high-performance computing and multimedia applications. LTE provides Verizon Wireless with the opportunity to move to a common platform with Vodafone, thus enabling Verizon Wireless to jointly develop innovative services and to expand the roaming relationship. As a result of joint work within the Third Generation Partnership Project standards organization, both companies will have robust interworking between LTE and legacy technologies.</p> <p>LTE technology was developed within the Third Generation Partnership Project (3GPP) standards organization. Working within the 3GPP, Verizon Wireless and Vodafone, as well as a broad group of infrastructure suppliers, device suppliers, and technology companies from around the world, have advanced the standards to enable a technology that will deliver unprecedented wireless broadband service for high performance mobile computing, multimedia, and consumer electronic devices and applications. The technology is designed to deliver mobile data networks with higher speed and throughput performance, lower latency, global roaming, and improved efficiencies. It is anticipated that peak speed will be in the tens of Mbps.</p> <p>Calculated data speed in maximum available bandwidth is a shared channel of 100 Mbps on the forward link and 50 Mbps on the reverse link, per cell sector. As with EV-DO and 1XRTT, this is a shared channel, and individual performance will vary based on loading and RF conditions.</p> <p>The selection of LTE provides parent companies Verizon and Vodafone with a unique opportunity to adopt a common access platform with true global scale and compatibility with existing technologies of both companies. Verizon Wireless and Vodafone have a coordinated trial plan for LTE that began in 2008. Trial suppliers include Alcatel-Lucent,</p>

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			<p>Ericsson, Motorola, Nokia-Siemens, and Nortel. These suppliers, along with others in the global community, have contributed significantly towards development of the standards in 3GPP. Discussions with device suppliers have expanded beyond traditional suppliers such as LG, Samsung, Motorola, Nokia, and Sony Ericsson, as consumer electronics companies anticipate embedded wireless functionality in their future products.</p> <p>While Verizon Wireless is not disclosing specific investment numbers for its 4G upgrade, it is expected to be within the range of investments made to roll out the 3G network.</p> <p>Verizon Wireless is well positioned with respect to spectrum licenses and existing network infrastructure that are critical for the provision of 4G services. In 2007, Verizon Wireless obtained 20 MHz (10 x 10 MHz) of spectrum in the AWS spectrum auction. In April 2008, Verizon Wireless was the winning bidder in the FCC's 700 MHz Auction for a block of licenses covering a nationwide spectrum footprint. The new spectrum is minimally 22 MHz nationwide (11 MHz x 11 MHz) and will be cleared for use in mid-February 2009. The Verizon Wireless LTE network in the 700 MHz spectrum will launch in 2010.</p> <p>Verizon Wireless has experienced considerable success in quickly, efficiently, and effectively converting/installing new technologies throughout its network, including converting from analog to CDMA, 2G CDMA circuit switched data, 2G CDMA packet switched data, 3G1X CDMA data and EV-DO Rev. 0 and Rev. A data. The same teams and methods will be used for launching a 4G data network.</p> <p><b>Wi-Fi Service</b></p> <p>Verizon Wireless does not offer Wi-Fi service due to its commitment to its nationwide EV-DO network. Currently available to more than 260 million people in 258 major metropolitan areas and 244 airports in the U.S. and in certain parts of Canada and expanding coast to coast, the EV-DO premier data service known as BroadbandAccess is the nation's most reliable high-speed wireless broadband network. BroadbandAccess offers the advantage of being available over a larger geographical area, whereas Wi-Fi is only available in localized "hot spots." Because EV-DO is backward compatible, subscribers with an EV-DO device can seamlessly switch to Verizon Wireless' 1xRTT NationalAccess network when they are out of the BroadbandAccess coverage area. NationalAccess service is already available in over a thousand cities and towns across the United States.</p>

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			<p><b>WiMax</b></p> <p>Verizon Wireless has selected LTE for 4G technology and has elected not to offer WiMax due to economies of scale based on worldwide acceptance and availability. WiMax and LTE (described above) both utilize the same physical layer, (i.e., the same modulation scheme, called Orthogonal Frequency Division Multiple Access), and operate within the same amount of bandwidths—up to 20 MHz uplink and 20 MHz downlink. The physical layer is the determining factor for data throughput, and the physical layers of WiMax and LTE are exactly the same. There are other performance factors such as power control, channel assignments, hand-offs, etc., but neither technology has been proven or even suggested to be superior to the other regarding these factors. It should also be noted that these factors are continually adjusted and optimized throughout the life of any technology to continually maximize its performance. Therefore, the performance in terms of data throughput and capacity, whether the technology is WiMax or LTE, is dependent upon the availability of clear bandwidth within the wireless provider’s licensed spectrum portfolios. Verizon Wireless has a nationwide 700 MHz license (11 MHz uplink and 11 MHz downlink). 700 MHz provides superior coverage and in-building penetration, and is equal in terms of capacity when compared to other spectrum bands because its capacity is not dependent upon frequency (whether 2.5 GHz or 700 MHz or any other frequency), but rather is dependent upon bandwidth.</p>
1.148	<p><i>The Offeror shall describe the Ethernet solutions that will be offered as part of this proposal.</i></p>	Y	<p>Verizon’s Ethernet solution for the Commonwealth is based on Verizon’s broad portfolio of Ethernet products. Ethernet access to Private IP is a core part of the design for the Commonwealth. Verizon has developed and deployed a highly scalable and resilient MPLS virtual private network (VPN) architecture. This architecture serves as the underlying infrastructure for Private IP. All of Verizon’s Ethernet services would be provisioned across this Private IP network in order to provide Ethernet access anywhere the Commonwealth requires. Private IP service provides Any-to-Any connectivity, so locations connected to the network with any number of access technologies, including but not limited to Ethernet, are able to communicate within the Commonwealth’s VPN(s). The Commonwealth would no longer need PVCs to communicate between sites; each site would simply send packets to the IP address of the location where the site needs to establish communication.</p> <p>Verizon offers Ethernet User Network Interfaces (UNIs) in increments of 10Mbps, 100Mbps, 1Gbps and 10Gbps. Verizon’s proposed Ethernet access would allow the Commonwealth a wide range of bandwidths from 1Mbps to 10Gbps. The Commonwealth could use a UNI of 1Gbps, but subscribe to an access bandwidth less</p>

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			<p>than the UNI bandwidth, such as 600Mbps. Verizon's Ethernet also supports features like dynamic bandwidth where changes in bandwidth requirements can be supported in short time periods. This would allow the Commonwealth to purchase the amount of bandwidth required and increase or decrease speeds as required.</p> <p>Verizon's solution also includes Ethernet Private Line (EPL) services. This service utilizes Ethernet over Synchronous Optical Network (SONET) (U.S.) technology to provide dedicated point-to-point Ethernet connectivity between two locations. EPL circuits provide a reliable solution for customers who require high-speed, low latency and secure Ethernet wide area network (WAN) connectivity. A unique component of the EPL value proposition is its ability to provide the resiliency and performance necessary to support mission-critical and latency-sensitive business applications. The scalability of EPL also allows the Commonwealth to purchase the bandwidth needed today and then increase the network bandwidth as needs increase. Consequently, the Commonwealth would not have to pay for more than needed.</p>
1.149	The Offeror shall have the ability to offer diversity from the CO to the customer's demarcation point avoiding all single points of failure.	Y	
1.150	The Offeror shall provide ongoing evaluation and recommendation of new technologies in order to enhance, improve, and reduce costs of service.	Y	
1.151	<i>The Offeror shall describe the methodology for evaluating, testing and implementing emerging technologies.</i>	Y	<p>Verizon's Customer Test Center (CTC) is a multi-million dollar facility that offers the Commonwealth and vendors the hands-on experience of testing proposed network, hardware, and software solutions on Verizon's live production networks. The CTC offers the Commonwealth the maximum in safe and flexible product and customer testing. Thirteen (13) secure lab rooms can be individually configured with network and hardware requirements to fit any testing needs. Common test types include these:</p> <ul style="list-style-type: none"> <li>▪ Interoperability - Do selected/multiple devices work with each other as needed?</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Proof-of-Service - Does the proposed solution work?</li> <li>▪ Baseline - What is the application's bandwidth utilization?</li> <li>▪ Characterization - What is the application's Wide Area Network (WAN) performance?</li> <li>▪ Performance - Does the application's WAN performance meet its requirements?</li> <li>▪ Vendor comparisons - Which vendor product delivers the needed features and functionality?</li> </ul> <p>A team of CTC engineers will simulate the Commonwealth's environment in this lab to provide a real-life testing scenario geared to address the Commonwealth's specialized testing needs. The CTC also collaborates with other Verizon organizations as well as third-party vendors as needed to bring in specialized equipment or expertise for a specific Commonwealth test.</p>
1.152	The Offeror shall provide a non-production environment for testing new technologies, updates, upgrades, and additions to the production network operated by the Offeror for the Commonwealth.	Y	
1.153	The Offeror shall identify and recommend methods and strategies to improve the existing Commonwealth WAN environment as part of its design solution.	Y	
1.154	Telecommunications Service Priority (TSP) Program		
1.155	The Offeror shall participate in the Telecommunications Service Priority (TSP) program.	Y	

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1.156	Reporting		
1.157	The Offeror shall provide daily, weekly, and monthly reports about switches, routers, remote access devices and transport.	Y	
1.158	The Offeror shall maintain access logs for all managed devices and provide real-time electronically to the Commonwealth.	Y	
1.159	The Offeror shall provide utilization and exception reports for all managed devices.	Y	
1.160	The Offeror shall provide standard web browser access from the Commonwealth to network management reports.	Y	
1.161	Circuit Testing		
1.162	The Offeror shall, at the time of the SmartJack installation, perform peak to peak voltage readings and those results should be noted on the service order.	Y	
1.163	The Offeror shall, at minimum, test T1 circuits for 24 hours	Y	

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	before turning over to the Commonwealth. The Offeror shall allow for an additional 24 hour acceptance testing period before closing the service order and billing commences.		
1.164	<i>The Offeror shall describe its testing procedures and include which tests and/or test patterns it will perform during service delivery.</i>	Y	Verizon follows industry best practices for circuit testing and turn-up. Verizon utilizes tools and systems to test Layers 1, 2 and 3 of the OSI model. Layer 1 (physical) testing can be (but is not limited to) T-Bird test sets that can test standard test patterns, such as all ones test and 511 bit pattern or customized bit patterns if needed. Layer 2 (Data Link) testing is done by extracting information from the customer's and provider edge routers. Layer 3 (Network) testing is done by extracting information from the customer router and the PIP routers as well as running an extensive PING test. In most cases, it is assumed that, if a Layer 3 test is successful, then Layer 1 and Layer 2 are working correctly. If a Layer 3 testing fails, Verizon then has the ability to dispatch Field Engineers for comprehensive Layer 1 and Layer 2 tests.
1.165	VOICE NETWORK SERVICES		
1.166	Miscellaneous Voice Services		
1.167	<i>The Offeror shall describe its strategy for providing local connection service to all Commonwealth locations with Centrex, business lines, small key, PBX, and ACD systems.</i>	Y	Verizon, the leading ILEC in Pennsylvania, provides geographic coverage for approximately 95% of the Commonwealth's locations. Our strategy for providing local connection services to the various voice platforms in use by Commonwealth agencies is to leverage our own infrastructure for the majority of the Commonwealth locations, and to utilize established relationships and interconnect agreements with the other ILECs in Pennsylvania to deliver local services to sites outside the Verizon territory. Verizon's long history of working with these ILEC's will provide seamless service delivery for the Commonwealth.  Verizon will provide Centrex, a managed, network-hosted communications service for the majority of the Commonwealth locations and will provide PRI and IP trunking services to support Commonwealth PBX and Key system locations.

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1.168	The Offeror shall ensure the infrastructure supports all current terminating equipment and systems.	Y	
1.169	The Offeror shall be responsible for providing local exchange services comparable, but not limited to the functionality and similarity in features to the existing local central office (CO) based exchange services currently used within Commonwealth infrastructure, as well as any additional features specified in Exhibit F-3.	Y	
1.170	<i>The Offeror shall explain its strategy for providing each of the following services to Commonwealth locations: basic dialtone, local exchange calls, intraLATA calls, interLATA calls within Pennsylvania, interstate calls, and international calls.</i>	Y	<p>Verizon's strategy for basic dialtone and local exchange calls is to leverage the ILEC infrastructure we already have in place in PA to provide these services. Where Verizon is not the ILEC provider, we will leverage our relationships with the other ILECS to secure statewide coverage for local services. Verizon will provide Centrex, a managed, network-hosted communications service for the majority of the Commonwealth locations and will provide PRI and IP trunking services to support Commonwealth PBX and Key system locations.</p> <p>Verizon's strategy for delivering intralata, interlata, interstate and international services is to leverage our Outbound Long Distance portfolio of services. Outbound Long Distance is a worldwide facilities-based voice service with the capability of transporting the Commonwealth's traffic from origination to termination, over one network in many locations. This wholly owned, local-to-global-to-local network will help simplify long distance communications, with the potential to reduce calling expense and increase productivity for Commonwealth agencies. Verizon will also leverage our security and fraud detection systems which are recognized as one of the most advanced in the industry to help minimize fraud for the Commonwealth.</p>

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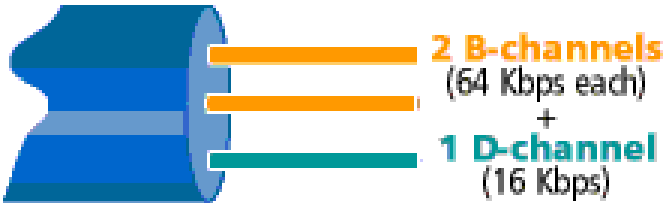


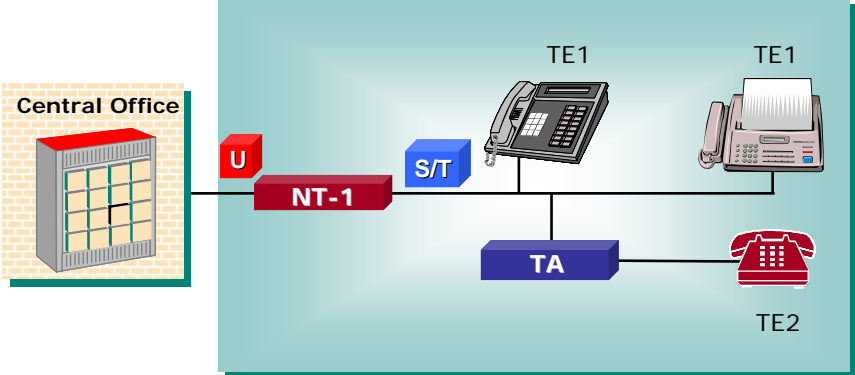
Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			Verizon's digital and Voice over IP switch platforms are selected and approved for the Network, providing quality current and future services and features to the Commonwealth. These switch technologies will provide the hub for dial tone services offered within this Proposal. These platforms' sophisticated trunk connectivity to the local, inter-LATA, intra-LATA, interstate and international toll and private networks will likewise provide the quality current and next generation transport needs and requirements of the Commonwealth.
1.171	The Offeror shall explain how control IDs and restoration priority (RP) levels are maintained and supplied to service vendors.	N/A	<b>QUESTION REMOVED ON ROUND TWO</b>
1.172	The Offeror shall cooperate with other service vendors involved in provisioning or restoring a portion of the National Security Emergency Preparedness (NSEP) service by honoring provisioning or restoration priority level assignments, or requests for assistance to provision or restore NSEP services.	Y	
1.173	The Offeror shall ensure all primary rate ISDN circuits meet the current International Telecommunications Union-Telecommunications Standardization Sector (ITU-T) primary rate ISDN specifications and support voice-grade data transmissions.	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.174	The Offeror shall ensure that all service vendors supplying underlying facilities are provided information necessary to implement priority treatment of facilities that support NSEP services.	Y	
1.175	The Offeror shall identify modifications that will be required as part of this contract.	Y	
1.176	<i>The Offeror shall describe the compatibility of the interfaces between the vendor's network and specified Commonwealth network components as well as the Offeror's network interface with LEC/CLEC COs. The Offeror shall identify modifications that will be required as part of this contract.</i>	Y	<p>Verizon's Centrex service will be compatible with the Commonwealth's current telephone sets with no additional cost.</p> <p>Centrex service is built to network standards and is a non proprietary system so that if a new vendor application is required and it is not offered by Verizon the client always has the option to attach the application to the Centrex. Thus best in class applications are always an option with Centrex because of the open network standards.</p> <p><b>ISDN BRI</b></p> <p>Verizon's ISDN BRI (Basic Rate Interface) service is a digital service overlay to existing telephony facilities. ISDN BRI capabilities are added to either Centrex lines or plain old telephone (POTS) lines to increase their voice and data handling capacity. This service is compatible with the Commonwealth's current equipment based upon National ISDN standards. ISDN BRI service leverages the Verizon ILEC network. An overview of the architecture of ISDN BRI service follows.</p> <p><b>ISDN BRI Architecture</b></p> <p>Integrated services digital network (ISDN) is a telecommunications standard specified by the International Telecommunication Union (ITU-T) that provides an all-digital, switched connection to support voice and data services.</p> <p>ISDN basic rate interface (BRI) is a two-wire digital subscriber line that provides:</p> <ul style="list-style-type: none"> <li>▪ Two 64 Kbps "B" (bearer) channels that can be used for voice, data, and video. Both B channels can be "bonded" providing a 128Kbps circuit.</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ One 16 Kbps “D” (data) channel that is used as the signaling channel for call set-up and call-completion messages, to support enhanced features (such as caller ID), and to carry low-bandwidth, packet-switched data.                             <ul style="list-style-type: none"> <li>- Technical note: Effective November 2, 2005, Verizon will no longer offer low-bandwidth, packet switched data service on the ISDN BRI “D” channel. Verizon will continue to support existing applications.</li> </ul> </li> </ul> <p>The diagram that follows depicts the channels comprising an ISDN BRI line.</p> <p style="text-align: center;"><b>Basic Rate Interface (2B + D)</b></p> <div style="text-align: center;">  </div> <p>Verizon Business supports both National (standard) and custom ISDN. National ISDN is the preferred design approach as it is standards-based and is supported by all switch suppliers to ensure switch interoperability.</p> <p><b>ISDN BRI at the Customer Premises</b></p> <p>The diagram that follows depicts ISDN BRI deployed at the customer’s premises.</p>

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p style="text-align: center;"><b>ISDN BRI at the Customer Premises</b></p>  <p style="text-align: center;"><b>Customer Location</b></p> <p>The description of the components depicted in the preceding “ISDN BRI at the Customer Premises” schematic follows.</p> <p><b>Network Termination Type 1 (NT-1)</b> – converts the local loop delivered to the customer premises from the Central Office (CO) from a two-wire circuit to a four-wire circuit needed for the ISDN set. These additional two wires are used to provide line power for the ISDN phone or other devices. The NT-1, when installed, must be connected to a local power source (an electrical socket) which should be backed up by universal power supplies (UPS) in the event of a power outage. The end user’s ISDN telephone must be within 250 feet (this can vary based on the type of ISDN equipment used and the condition of the inside wiring) from the NT-1. NT-1s can either be installed as a single unit or rack mounted. The NT-1 plugs into the two-wire connection coming into the customer premises. This connection is called the <b>U interface</b>.</p> <p><b>Terminal Equipment Type 1 (TE-1)</b> is a device defined as an ISDN compatible device (ISDN ready), such as an ISDN telephone set or ISDN PC board. The TE-1 or terminal adapter (TA) plugs into the S/T interface of the NT-1 device which is a four-wire connection.</p>

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			<p><b>Terminal Equipment Type 2 (TE-2)</b> is a device defined as a non-ISDN compatible device, such as an analog telephone or a PC with RS-232 cables. These types of devices require a TA to convert the existing interface cable to an ISDN four-wire cable.</p> <p>The <b>Terminal Adapter (TA)</b> converts non-ISDN type devices to ISDN-compatible format. Some older analog telephones (i.e., 1A2 key sets) and many proprietary electronic key telephone systems will not work on ISDN lines through a terminal adapter (TA).</p> <p>The <b>S/T interface</b> is the part on the ISDN modem to which all other ISDN devices connect in order to communicate over ISDN. Many ISDN modems and adapters have a U interface option that builds the NT-1 into their hardware. These devices can be connected directly into the ISDN wall jack.</p>
1.177	All services delivered shall be compatible with the existing switching equipment located at the serving ILECs/CLECs central offices and the agencies terminating telephone systems. The Offeror shall be responsible for all interfacing requirements.	Y	
1.178	The Offeror shall ensure that all facilities are engineered to provide a grade of service equal to or better than P.01.	Y	
1.179	<i>The Offeror shall describe how new service requests for a location previously granted control IDs and RPs is processed.</i>	N/A	<b>QUESTION REMOVED ON ROUND TWO</b>

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.180	The Offeror shall provide detail on how routing of calls to 1-9-1-1 will be routed to the Commonwealth's Capitol Police.	Y	
1.181	The Offeror shall specify the mean time to repair (MTTR) and the mean time between failures for each network and security component included in its proposed solution.	Y	
1.182	The Offeror shall support enhanced 9-1-1 requirements.	Y	
1.183	The Offeror shall provide an enterprise IVR solution that can be utilized by any Contract Participant without regard to physical location.	Y	
1.184	<i>The Offeror shall describe its hosted and enterprise IVR solutions and features including but not limited to location based routing, DTMF, speech to text and speech recognition.</i>	Y	<p>Verizon's network-based interactive voice response (IVR) service, called Enhanced Call Routing (ECR) is a feature rich service that will provide the Commonwealth with an enterprise routing solution to allow:</p> <ul style="list-style-type: none"> <li>▪ Callers' menu choices – DTMF or Natural Language Speech Recognition</li> <li>▪ Database look-ups</li> <li>▪ Caller-entered digits collection and enterprise routing</li> <li>▪ Text to Speech</li> <li>▪ Network transfer enablement – Speed dials and freeing up premise trunks</li> </ul> <p>Verizon's Network ECR provides feature functionality and customization flexibility that makes it possible for callers to reach the right enterprise resource the first time, and allows callers to be transferred directly to another contact center without agents having to make a new call.</p>

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			<p>Verizon’s network based IVR solution eliminates the need for the Commonwealth to invest in new hardware and software. When connected to an agencies host computer or Intelligent Call Routing system, Verizon’s ECR makes it possible for enhanced self service and enterprise routing, therefore allowing call center agents to handle the more complex calls. Verizon’s Network IVR solutions support the flexibility of being maintained by Verizon, or directly by the Commonwealth agency using PC-based tools provided by Verizon.</p> <p>ECR utilizes next generation service nodes that are fully integrated with the Verizon network to help ensure that the Commonwealth fully maximizes its domestic operations and its Customer Relationship Management (CRM) applications. The current features available on the Verizon network IVR include:</p> <ul style="list-style-type: none"> <li>▪ Menu Routing – DTMF Routing</li> <li>▪ Automated Speech Recognition – Natural Language or Directed Dialogue</li> <li>▪ Message Announcement – Promotional or Network Messages</li> <li>▪ Remote Audio Update – Updates to audio via touch tone access</li> <li>▪ Take-Back and Transfer - 3 Way TNT/Conference</li> <li>▪ Caller Takeback/Giveback</li> <li>▪ Announce Connect – Announcement of data collection elements to agents</li> <li>▪ Busy/No Answer Rerouting (BNAR) – Rerouting of calls before termination</li> <li>▪ Database Routing – Look up and routing of caller entered digits</li> <li>▪ Custom Call Records – Customized Reporting</li> <li>▪ Survey – Survey’s in this network</li> <li>▪ ICT – Customer can build an maintain their own applications</li> <li>▪ HostConnect – Data retrieval and speak back functionality</li> <li>▪ Intelligent Call Routing and Intelligent Queuing</li> </ul> <p>The Verizon IVR solution combines the benefits of a network provider host based system, while also delivering an enterprise solution that is available to all Commonwealth locations statewide.</p>



Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.185	The Offeror shall specify what services implemented will minimize the impact of a facility failure on the proposed services.	Y	
1.186	The Offeror shall provide a table of classes of service assignable at the telephone number level.	Y	
1.187	The Offeror may utilize '9' as the access code for placing outbound calls.	Y	
1.188	The Offeror shall ensure that all locations served by the Offeror or its subcontractors have transparent access to 9-1-1 emergency service via the public switched network. "Transparent" means that whether a user dials any standardized PBX or CO-based system access code for a local line, there will be no routing delays: the user will experience the same speed of access to the local 9-1-1 facility as experienced by all users of that geographic subdivision served by the 9-1-1 facility.	Y	
1.189	The Offeror shall provide Centralized Automatic Message Accounting (CAMA) services	Y	

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	supporting call party release and other enhanced features to locations within the Commonwealth requiring enhanced 9-1-1 services.		
1.190	The Offeror shall confirm 9-1-1 emergency access from all Commonwealth locations to the correct public safety answering point (PSAP) before implementing any new service to include location and call back information.	Y	
1.191	The Offeror shall provide the following classes of services: "911" only, Centrex only, Centrex and local, Centrex and local and directory assistance, Centrex and local and all of Pennsylvania, North American numbering plan less "809" NPA's, North American numbering plan and "809" NPA's and North American numbering plan and international.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.192	The Offeror shall have the ability to offer diversity from the CO to the Contract Participant demarcation point avoiding all single points of failure.	Y	
1.193	The Offeror shall support the ability of Commonwealth offices in the Harrisburg Capital Complex to dial 1-9-1-1 to reach the Commonwealth's Capitol Police desk.	Y	
1.194	The Offeror shall provide protection from high voltage electrical surge caused when lighting strikes the cabling between the buildings.	Y	
1.195	<i>The Offeror shall describe how it will address and meet future 9-1-1 emergency access technologies and regulatory requirements and how this information will be communicated to the Commonwealth.</i>	Y	<p>As a leading provider of IP networking globally and domestically, driving IP technology in the communications space including the 9-1-1 markets is important to Verizon. Similar to NENAs published positions, Verizon endorses and endeavors to develop a NG9-1-1 system that is as reliable and secure as the legacy system it will replace.</p> <p>Internally, significant investments in equipment, software and personnel enable Verizon to evaluate Next Generation technologies, address associated issues/opportunities and prepare for their introduction.</p> <p>Externally, Verizon contributes to the NENA i3 standards as a member of NENA i3 technical workgroup (via Telecordia) and as a member of NENA i3 security workgroup. Verizon also works with various standards organizations, such as ATIS-IETF, 3GPP, and 3GPP2, which are focused on Next Generation 9-1-1 architecture, and funds Academic Research on Next Generation Solutions. Following are examples of this activity:</p> <ul style="list-style-type: none"> <li>▪ Columbia University Instant Messaging Prototype</li> <li>▪ Telecordia Generic Standards</li> </ul>

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			Verizon also works extensively at the federal and state levels on regulatory and policy issues facing emergency communications access. Verizon has traditionally utilized NENA events (national, regional and state levels), press releases and individual customer meetings to communicate its position and/or perspective on Next Generation technologies' applicability to E9-1-1 systems. The local Verizon Account Manager can coordinate meetings between Verizon and the Commonwealth to discuss Next Generation technology applications to E9-1-1 systems.
1.196	The Offeror shall provide the Commonwealth (upon request) agency specific traffic studies of a given group of analog Centrex lines, analog business lines or trunks, ISDN PRI trunks, and/or digital Centrex lines.	Y	
1.197	The Offeror shall provide monthly and 13 month rolling traffic statistics and analysis reports, including usage, for enterprise, agency, location, and station levels.	Y	
1.198	The Offeror shall provide immediate access to local and long distance call detail reports from CO-based switches.	Y	
1.199	The Offeror shall provide detailed and summary reports to the Commonwealth and its agencies. These reports shall include calls by month, calls by location, peak hour traffic,	Y	

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	exception, frequently called number, long duration calls, off-hours call information, operator assisted calls, 900 calls and toll free call reports.																																			
1.200	The Offeror shall ensure that long distance usage charges are billable to the origination station line number.	Y																																		
1.201	<i>The Offeror shall describe its method (i.e. minute, ten second, six second), not the actual costs, for rounding the usage rates included in its Cost Submittal.</i>	Y	<table border="1"> <thead> <tr> <th>Call Type</th> <th>Initial Period</th> <th>Additional Increments</th> </tr> </thead> <tbody> <tr> <td>Domestic Outbound Service (except Operator Assisted)</td> <td>18 seconds</td> <td>6 seconds</td> </tr> <tr> <td>Domestic Outbound Service Operator Assisted</td> <td>60 seconds</td> <td>60 seconds</td> </tr> <tr> <td>Outbound Service calls to Mexico and Atlantic, Pacific, and Indian Ocean Inmarsat Standard A Service locations (except Operator Assisted)</td> <td>60 seconds</td> <td>60 seconds</td> </tr> <tr> <td>Outbound Service: International to all other locations (except Operator Assisted)</td> <td>30 seconds</td> <td>6 seconds</td> </tr> <tr> <td>Outbound International</td> <td></td> <td></td> </tr> <tr> <td>Operator Assisted</td> <td>60 seconds</td> <td>60 seconds</td> </tr> <tr> <td>Domestic (Toll Free) Inbound Service</td> <td>18 seconds</td> <td>6 seconds</td> </tr> <tr> <td>International (Toll Free) Inbound Service</td> <td></td> <td></td> </tr> <tr> <td>Feature Option 2 Customers</td> <td>30 seconds</td> <td>6 seconds</td> </tr> <tr> <td>Feature Option 3B Customers</td> <td>18 seconds</td> <td>6 seconds</td> </tr> </tbody> </table>	Call Type	Initial Period	Additional Increments	Domestic Outbound Service (except Operator Assisted)	18 seconds	6 seconds	Domestic Outbound Service Operator Assisted	60 seconds	60 seconds	Outbound Service calls to Mexico and Atlantic, Pacific, and Indian Ocean Inmarsat Standard A Service locations (except Operator Assisted)	60 seconds	60 seconds	Outbound Service: International to all other locations (except Operator Assisted)	30 seconds	6 seconds	Outbound International			Operator Assisted	60 seconds	60 seconds	Domestic (Toll Free) Inbound Service	18 seconds	6 seconds	International (Toll Free) Inbound Service			Feature Option 2 Customers	30 seconds	6 seconds	Feature Option 3B Customers	18 seconds	6 seconds
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1.202	The Offeror shall be able to control the routing of outbound traffic for cost optimization.	Y	
1.203	<i>The Offeror shall describe its approach to monitor and analyze network traffic.</i>	Y	<p>Verizon will monitor the Commonwealth of Pennsylvania's Centrex 24 hours a day, 7 days a week, delivering unsurpassed performance and reliability.</p> <p>Centrex guarantees P.01 grade of service. Verizon Centrex service is based on software instructions stored in the central office switch that controls incoming and outgoing calls and determines the system and end user features on each line. All switches in the Verizon network are monitored around the clock by highly trained Network Services technicians and engineers.</p> <p>Verizon's Network Management Centers are broken down into three major areas. The Transmission Performance group is primarily focused on all aspects of managing Verizon's extensive long distance transmission network. The Switch and Systems Support group manages both the physical switch fabric as well as the logical traffic flow across Verizon's Domestic and International Voice networks. The Local Services network management center has combined responsibilities for Verizon's local transmission and switch networks.</p> <p>The objective of all groups in network management, through proactive maintenance and monitoring, is to resolve troubles before the customer recognizes there has been a problem. Achieving this objective results in reduced alarms in the network and quicker resolutions of troubles. Proactive maintenance and monitoring are designed to reduce the number of major outages as well, because the problems are often caught in the developmental stages. Network Management is staffed twenty-four hours a day, 365 days a year, ensuring that problems can be handled at any time that they occur. The Network Management Centers are also self-sustaining with uninterruptable power systems as well as dual generator backup. Power is dually fed to the centers from two power substations. The centers are also located on SONET fiber rings and tied to two voice switches to ensure full survivability.</p> <p>Verizon has always conducted proactive monitoring on an individual case basis, but now we have created a specialized department and hired an entire team of people dedicated to proactive monitoring and to meeting service objectives. The Network Event Management Department (NEMD) is responsible for notifying customers impacted by planned maintenance on networks.</p> <p>Long Distance customers are notified by an automated fax and/or e-mail generated by Scopus approximately one week prior to the maintenance activity. If fax or e-mail</p>

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			<p>contact information is unavailable for a customer, NEMD will contact the account team or the customer by telephone, verify the appropriate contact information for future use, and update Scopus.</p> <p>Customer trouble histories are maintained and trending analysis is performed at both the system and circuit levels on an ongoing basis. This enables Verizon to identify trends and isolate problems to a common source for correction.</p> <p>Each Verizon Local Switching Hub is staffed by maintenance and operations personnel. In addition to installing and maintaining Local Services, these personnel monitor equipment and alarms and assist in repairing major outages.</p> <p>Verizon monitors and analyzes the status of the switches, digital cross connect equipment and voice mail equipment; alarms at the switch sites, including fire detection, HVAC, and primary/secondary power; and network elements in the SONET rings. A team of professionals is available 24x7x365 to assist the Commonwealth with local repair.</p>
1.204	The Offeror shall ensure all equipment deliveries shall be inside delivery to the 'ship to' address.	Y	
1.205	The Offeror shall inform the Commonwealth one business day before a service visit to confirm phone number, address and access permission.	Y	
1.206	The Offeror shall ensure all deliveries under the Contract are securely packaged so as to avoid breakage or damage in accordance with industry standard practice.	Y	



Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.207	The Offeror shall coordinate a schedule with the Contract Participant for all complex voice orders involving multiple systems.	Y	
1.208	The Offeror shall provide a method for detecting which local services lines (Centrex and business) have no activity, and therefore, are candidates for disconnecting. The Offeror shall provide methods available for determining local usage.	Y	
1.209	<i>The Offeror shall describe how it will address local loop failures for all Commonwealth locations.</i>	Y	Our first step in identifying local loop failures is our proactive monitoring. Centrex is monitored 24x7 from the Central Office by highly experienced engineers. In the event a local loop facility issue is encountered, the technician will transfer the service to another facility or correct the facility fault immediately. Verizon, the leading ILEC in Pennsylvania, provides geographic coverage for approximately 95% of the Commonwealth's locations. Where a Commonwealth location is served by an Independent Local Exchange Carrier, Verizon will be responsible to coordinate resolution on any local loop failures. Verizon's long history of working with these ILEC's will provide seamless service delivery for the Commonwealth. If the facility can not be corrected immediately, a maintenance repair splicer is notified and dispatched to correct the problem.
1.210	The Offeror shall comply with FCC rulings on "portability."	Y	
1.211	The Offeror shall provide point-to-point, two wire and four wire services.	Y	

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1.212	The Offeror shall have the ability to offer diversity from the CO to the customer's demarcation point avoiding all single points of failure.	Y	
1.213	The Offeror shall react and respond to incidents that are caused by an external provider and/or Offeror and shall notify the Commonwealth of the incidents.	Y	
1.214	The Offeror's maintenance personnel will inform the location contact before arriving for work.	Y	
1.215	The Offeror shall keep the NPA/NXX routing information up to date and provide the updates to the Commonwealth on a monthly basis.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.216	The Offeror shall provide a description and a diagram of the proposed network which must be in Visio format, and must show all systems and circuits through which significant amounts of Commonwealth traffic will pass. This should include all systems managed by the Offeror or its subcontractors.	Y	
1.217	The Offeror shall offer long distance service with and without local phone service.	Y	
1.218	Miscellaneous Telephone Equipment		
1.219	The Offeror shall ensure its miscellaneous telephone equipment/accessory inventory list includes, at minimum, all items as shown on Exhibit F-2.	Y	
1.220	The Offeror shall provide the Commonwealth with a list of the miscellaneous telephone equipment/accessories it cannot provide, explain why and offer an alternative option if available.	Y	
1.221	The Offeror shall provide the detailed catalog of the equipment	Y	

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	that shall be used. Technical specifications shall be provided for all station equipment and enclosures proposed.		
1.222	The Offeror shall include any other miscellaneous telephone equipment/accessories not identified in Exhibit F-2 that will be available for purchase by the Commonwealth.	Y	Centrex service is built to network standards and is a non proprietary system so that if a new vendor application is required and it is not offered by Verizon the client always has the option to attach the application to the Centrex. Thus best in class applications are always an option with Centrex because of the open network standards. Verizon's Centrex service will be compatible with the Commonwealth's current telephone sets with no additional cost
1.223	The Offeror shall ensure all deliveries will be F.O.B. Destination.	Y	
1.224	Cabling Services		
1.225	The Offeror shall ensure on site technicians are skilled and have all the necessary resources, tools and materials to perform cabling, jack inserts, terminal box, faceplates, testing and labeling.	Y	
1.226	The Offeror shall ensure the patch panel and/or wiring block is labeled with the telecommunications outlet number and locations of the remote end in accordance with TIA 606 standards.	Y	

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1.227	The Offeror shall ensure all cabling be installed and tested in accordance with the current version of the EIA/TIA -568 Commercial Building Wiring Standard and all associated reference documents.	Y	
1.228	The Offeror shall ensure jacks be wired according to EIA/TIA-568 Commercial Building Wiring Standard EIA/TIA 568B, bulletin TSB-36, or bulletin TSB-40A standards, based on relevancy.	Y	
1.229	The Offeror shall ensure that all 5e/6/future unshielded twisted pair (UTP) cable are installed and adhere to the installation and testing requirements of the current versions of IIA/TIA/TSB/EIA standards.	Y	
1.230	The Offeror shall ensure cabling is type CMR unless cabling is run in air plenum space in which case cabling must be CMP.	Y	
1.231	The Offeror shall perform testing which may include, but is not limited to, attenuation testing, near-end crosstalk (NEXT) testing, distance testing (time	Y	

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	<p>domain reflectometer - TDR), wiremap testing, and tone testing for any and all of the circuits and systems. The nature of the testing is determined by the devices in use and the circuit type. Testing is typically per TIA/EIA TSB-67 standard and all associated reference documents. As a minimum, the test results for each telecommunications outlet location must contain the jack number and wire map.</p>		
1.232	<p>The Offeror shall ensure testing and certification for all cables and their associated jacks, patch panels and jumpers meet the appropriate standard for the type of network being installed (i.e., voice, data). The Offeror shall provide a complete copy of all certification test results to the Contract Participant.</p>	Y	
1.233	<p>The Offeror shall provide up to date cable records in a uniform manner located at the MDF, IDF, or patch panel.</p>	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.234	The Offeror shall follow the Commonwealth's format for cable records.	Y	
1.235	The Offeror shall professionally dress and label all cables at both ends.	Y	
1.236	The Offeror shall ensure the numbering and coloring scheme is kept uniform and consistent throughout the entire site.	Y	
1.237	The Offeror shall ensure re-used cabling is tested and recertified.	Y	
1.238	The Offeror shall ensure all cable records remain the property of the Commonwealth and deliver them to the Commonwealth.	Y	
1.239	Order Management		
1.240	The Offeror shall allow a Contract Participant to place an emergency or temporary order for service without a minimum service commitment.	Y	
1.241	The Offeror shall complete orders within the timeframe defined by the requested due date.	Y	

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1.242	Prior to billing of any order completed by the Offeror, the Offeror must obtain acceptance from the order creator certifying that the work requested on the order was completed to the order creator's satisfaction.	Y	
1.243	The Offeror shall complete service orders based on the standard order interval for that service.	Y	
1.244	The Offeror shall obtain acceptance from the creator of the order certifying that the work requested on the order was completed to the satisfaction of the customer prior to billing.	Y	
1.245	Installation, Moves, Adds and Changes		
1.246	The Offeror shall be responsible to deliver Intrastate and Interstate facilities to the assigned demarcation of the building. This includes residential service and newly built buildings.	Y	
1.247	The Offeror shall perform acceptance testing with the Contract Participant prior to	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	declaring ready for use. All test results shall be shared with Contract Participants.		
1.248	The Offeror shall provide end-to-end circuit connectivity (that includes extended demarcation) including installation, comprehensive testing, maintenance, and problem resolution.	Y	
1.249	The Offeror shall provide end-to-end data circuit connectivity for all circuits/services terminated on a demarcation (that includes extended demarcation) including installation, comprehensive testing, maintenance, and problem resolution.	Y	
1.250	The Offeror shall perform moves, adds, changes and maintenance.	Y	
1.251	The Offeror shall provide confirmation of its ability to perform IMAC, cabling and maintenance requests for telecommunications services. The Offeror must be able to perform: 1. Cabling from demarcation to	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	<p>end telephone</p> <p>2. Private Branch eXchanges (PBX)</p> <p>3. CPU &amp; Consoles such as (Tone Commander) ISDN sets, attendant consoles, variety of IP sets (Polycom, Cisco, etc.)</p> <p>4. PC voice mail systems (a variety) associated with a variety of PBX systems</p> <p>5. Conference phones, such as Polycom</p> <p>6. The term installation refers to the complete installation from the telecommunications outlet (voice, video or data) to the terminal block, patch panel or the Light Interface Unit (LIU)</p> <p>7. All cables will be labeled at both ends. Additionally, the patch panel or LIU will be labeled with the telecommunications outlet number and locations of the remote end.</p>		

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.252	For newly purchased phones, the Offeror shall assemble the phones, place the phones on user's desks, plug phones into the jack and test and apply a printed label for new phones.	Y	
1.253	The Offeror shall have contingencies available in the event a required part is out of stock and/or unavailable to the service technician performing the maintenance work.	Y	
1.254	Performance Management		
1.255	The Offeror shall ensure that 98% of all Directory Assistance and Operator calls placed during normal business hours will be answered within an average of three rings.	Y	
1.256	The Offeror shall react and respond to incidents, as well as notify the Commonwealth of service disruptions caused by another service provider.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.257	The Offeror shall have an alternative detailed plan for resolution of service during a major outage.	Y	
1.258	The Offeror shall have the ability to deliver redundant transport services from an alternate service provider.	Y	
1.259	<i>The Offeror shall describe, in detail, all components or services in the proposed network that have redundant capabilities.</i>	Y	The digital switches providing the Commonwealth analog, ISDN and digital Centrex line services have a redundancy in their control and administrative processors controlling and managing the switched services, group translations and features. The infrastructure is likewise redundant in communications paths through the switches, excluding the line card or equivalent and customer's DS1 and PRI switch termination cards. The power systems within the Verizon central offices have battery backup systems supporting the switch and interoffice and loop electronics. These power systems have a fuel supported power backup to the battery systems. The fiber electronics and facilities between the central office and remote terminals, providing for the loop facilities, are redundant.
1.260	<i>The Offeror shall describe, in detail, any components or services in the proposed network that will not have redundant capabilities or are a single point of failure.</i>	Y	The analog, P set and ISDN Centrex line services do not have redundancy at the line card or equivalent. Likewise, the DS1 and PRI trunk cards are not redundant. Services on copper loop facilities between the serving switch and customer location are not redundant. The universal and TR008 integrated line cards in central office and remote terminals, providing for the subscriber loop facilities are not redundant. However, the fiber facilities between the central office and remote terminals are redundant.
1.261	Directory Listing Services		
1.262	The Offeror shall provide Directory Listing and Assistance services to the Commonwealth. This includes providing all	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	<p>business, government, guide to human services, easy reference, public safety, and emergency service listings, as well as yellow page advertising as needed. Information shall be provided in a timely fashion to all Directory Listing entities, which includes dialed information services as well as phone book publishers.</p>		
1.263	<p>The Offeror shall disseminate information related to additions, changes, deletions and other required information to all appropriate providers, including 555-1212, 411, 800, or any other Independent Company providing Directory Assistance services as part of the order process. The Offeror shall also be responsible for the removal of any old information.</p>	Y	
1.264	<p>The Offeror shall provide a common source for providing all directory assistance and operator services to the Commonwealth, including all public safety and emergency services as appropriate. Directory Assistance and Operator services must be</p>	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	available to all Commonwealth locations.		
1.265	The Offeror shall accept the raw information provided by the Commonwealth and shall organize and archive the additions, changes, and deletions into the proper cap, sub-cap, indent and sub-indent formats. The Offeror is responsible for coordinating and submitting all information required by the appropriate telephone company responsible for Directory Listings and Assistance in its coverage area as part of the order process. The Offeror will also be responsible for the removal of any old information. In addition, the Offeror shall ensure all publication deadlines are met.	Y	
1.266	The Offeror shall provide and maintain a Directory Listing schedule to the Commonwealth outlining all of the different telephone company publication submission deadlines and distribution dates that are applicable.	Y	



Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.267	<i>The Offeror shall describe how it proposes to provide telephone binder services.</i>	Y	<p>Verizon meets the PA directory requirements by publishing and delivering Verizon directories throughout the Verizon LEC areas. Verizon performs these directory activities with Idearc Media, Verizon’s official publisher.</p> <p>If the territory is out of franchise (not within Verizon territory), the following situations occur:</p> <ul style="list-style-type: none"> <li>▪ Verizon has EAS requirements to provide those independent listings to Verizon customers, they are acquired from the independent and included in the Verizon book</li> <li>▪ Verizon has agreements with the independent to publish for them; the independent listings will be included in the Verizon book and delivered to the independent territory.</li> <li>▪ Verizon’s publisher, Idearc, chooses to include the independent area for marketing reasons (for reasons other than regulatory/legal requirements); Idearc may acquire the independent listings and/or deliver in the independent region.</li> </ul> <p><b>Standard Directory Services</b></p> <ul style="list-style-type: none"> <li>▪ Listing of the customer’s name and address with Local Directory Assistance.</li> <li>▪ One standard listing in the white pages that covers the customer’s business location.</li> <li>▪ One standard listing in the yellow pages. The customer’s name, address, and telephone number are included under one "header" of the customer’s choice (example: Medical Equipment and Supplies).</li> <li>▪ One copy of each local yellow and white pages directory.</li> </ul> <p><b>Directory Listings</b></p> <p><b>Standard (No Charge) Listing</b></p> <ul style="list-style-type: none"> <li>▪ Primary Listing: the Primary, or Main Listing, is the free white pages listing that each customer receives.</li> <li>▪ Classified Heading: The heading in the Yellow Pages under which the customer’s listing appears; this normally indicates the type of business. Local Service customers receive one free listing in the yellow pages.</li> </ul> <p><b>Optional Listings – (Charges May Apply)</b></p> <ul style="list-style-type: none"> <li>▪ Additional Listing: This would be a listing in addition to the Primary or Main Listing.</li> <li>▪ Foreign Listing: This is a listing appearing in a directory other than the customer’s primary directory.</li> </ul>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<ul style="list-style-type: none"> <li>▪ Cross Reference Listing: Refers reader to the actual location of the customer's directory listing. The cross-reference listing does not contain a telephone number.</li> <li>▪ Alternate Call Listing: Provides another number to call if the primary number doesn't answer.</li> <li>▪ Non Pub: A Non-Published telephone number is omitted from both the printed directory and from Directory Assistance.</li> <li>▪ Non List: A Non-Listed number is omitted from the printed directory and appears only in Directory Assistance files.</li> </ul> <p><b>Directory Close Date</b></p> <p>A directory close date for white page listings is established for each directory to ensure that customer listings are processed in a controllable and timely manner, permitting the careful review of all listings and the clearing of error reports and close reports prior to publishing the new directory. The publisher will accept listings, but any listing or change received after the directory closing date, will not appear until the next addition of the directory. It will appear the following year.</p>
1.268	The Offeror shall ensure that all directory assistance and operator services fees will be a flat rate per call regardless of duration or distance of call.	Y	
1.269	The Offeror shall ensure that fees for directory assistance and operator services shall be charged to the individual Commonwealth locations using the working telephone number (WTN).	Y	
1.270	Automated Call Distribution		

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.271	<i>The Offeror shall describe its Automatic Call Distribution (ACD) service packages to include both hosted and premise based ACD solutions.</i>	Y	<p>Verizon's solution, Web Center, is an Internet-based hosted customer interaction solution. Web Center would provide the Commonwealth the ability to subscribe, set up, and support its operations online, without the requirement to purchase equipment. Since Web Center is a unified solution, the Commonwealth's ACD agents could easily handle multiple contact forms ranging from traditional toll free voice to email and chat from a single control screen. As a "virtual" contact center, the power of Web Center resides in Verizon's ubiquitous network rather than in equipment located at specific geographic locations. As a result, the Commonwealth's Web Center agents could be located anywhere—in multiple centers, in small offices, or even at home.</p> <p>Web Center provides the Commonwealth with a library of interaction services, hosted in the Verizon network, which the Commonwealth can order, maintain, use, monitor and manage through the Internet without the need to implement traditional telephony-based hardware/software (such as PBXs, ACDs, or IVRs) on Commonwealth premises.</p> <p>Verizon offers a wide range of premises-based ACD options. Manufactures include Avaya, Cisco, Genesis, and Nortel. This makes Verizon agnostic and helps to ensure that the solution will truly address the Commonwealth's business issues.</p>
1.272	The Offeror shall provide the Commonwealth with custom designed ACD reporting package(s) that includes at minimum: cradle to grave, incoming and outgoing call statistics, details and trends.	Y	
1.273	The Offeror shall provide an ACD solution that includes the following packages: basic to enhanced system feature packages, agent feature package set, supervisor feature package set, management and information system feature package set.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.274	<i>The Offeror shall describe its strategy for providing the ACD functionality to all CO-based telephone locations requiring it.</i>	Y	Verizon's solution, Web Center, will support ACD functionality to all CO-based telephone locations in PA. Web Center is the latest intelligent call routing product, and it will support all of the Commonwealth's ACD Centers. Since Web Center is a network-based ACD solution, callers will extend to agents via a 10-digit out-dial to any agent located anywhere in the Commonwealth. Web Center is a robust, customer-interaction solution capable of meeting the specific needs of this project, including ACD, CTI, and IVR, all in one product suite. Web Center will also provide additional features that will allow the Commonwealth to expand the services it provides in the future without having to involve multiple vendor applications and complicated systems integration.
1.275	The Offeror shall provide an ACD solution that is uniformly available throughout the Commonwealth.	Y	
1.276	The Offeror shall offer a small office, cost effective ACD solution.	Y	
1.277	The Offeror shall provide Line of Business Reporting as part of its ACD solution. This should provide the Commonwealth with daily, weekly, monthly, quarterly and yearly reports on the types of calls that are being handled by its help desk.	Y	
1.278	The Offeror shall provide a hosted Telephone Call Recording service for Commonwealth ACD Call Centers and CO-based services.	Y	


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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.279	<i>The Offeror shall describe the level of redundancy for its ACD solution.</i>	Y	<p>Web Center provides network redundancy by mirroring all processes, servers, and functions, so no one point of failure can disrupt service on the network. It also achieves fault tolerance across the network by deploying hot backup across all application server processes. The Commonwealth's application will be designed as a master process and will correspond with a backup process that completes a transaction simultaneously.</p> <p>Only the master process actually commits the transaction. In the event the master is not able to commit the transaction, the backup is promoted to the master, and it completes the transaction. When the master is restored, it comes up in a backup position. It is not necessary to normalize all masters to be at one site since masters and backups both process all transactions. This is very different from a warm standby. This is actually a fully hot active backup methodology, which assures minimum time to recover from single points of failure and maintain session state.</p> <p>Web Center provides resiliency and fail-over architecture with a series of technologies at different points in the architecture. These include the following:</p> <p>NCR Network Call Re-Direct</p> <ul style="list-style-type: none"> <li>▪ Network Call Redirect (NCR) is the mechanism deployed by Web Center to re-route inbound calls around failed trunks, switched network paths or failed telephony servers.</li> <li>▪ NCR migrates control of the overflow calls from the terminating switch to the originating switch and establishes multiple (up to five) overflow attempts for individual calls. The enhancements enable the Verizon network to overflow DAP-based DAL, national, or international terminations for SAC and Vnet services.</li> <li>▪ The NCR provides Web Center with the ability to re-route around (5) different trunk groups. The following Web Center methodology is in use with NCR: <ul style="list-style-type: none"> <li>▪ Upon the condition of a busy trunk group, NCR will overflow up to (5) additional trunk groups on that server. There are (8) potential trunk groups on a server.</li> <li>▪ Upon the condition of a Call Reject (due to the application software rejecting a call); the call will not overflow.</li> </ul> </li> </ul> <p>Upon the condition of a trunk, switch, server failure, NCR will overflow up to (3) additional trunk groups on that server. NCR will then choose a reciprocal pair server for the last (2) potential overflow termination choices.</p>
1.280	The Offeror shall provide a diverse and redundant ACD solution with the ability to automatically reroute calls to the	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	alternate server to prevent the loss of call distribution.		
1.281	The Offeror shall provide the same call reporting details during failover as during normal operations.	Y	
1.282	The Offeror ACD solution shall include call monitoring for quality assurance purposes.	Y	
1.283	<i>The Offeror shall describe the type of answer supervision techniques that are used in its network solution.</i>	Y	<p>Supervisors can remotely listen in on an agent’s call without detection, coach the agent with the whisper feature (so that the agent can hear the supervisor, but the caller cannot), or send a message to the agent’s chat window for text coaching. Supervisors also have the ability to join calls, interrupt calls, and take control of the interaction.</p> <p>For call monitoring, Web Center can be set up to monitor 0% up to 100% of inbound calls. Additionally, a supervisor can monitor the status of every local and remote agent in real-time over the LAN, WAN or Internet. For quality monitoring, supervisors can record telephone conversations, as allowed by state laws, and monitor and save Web chats, e-mails, and Web collaboration sessions. Supervisors have the capability to view the agent’s screen in real-time.</p> <p>Supervisors have the ability to monitor the status of interactions in queue as well as the status of specific agents, so they can make recommended workflow changes as activity volume requires. This also includes color-coded thresholds for contact alarms. Supervisors can also interface directly with callers by inserting themselves into the queue and taking calls like a live agent. A summary of the real-time tools available to supervisors in Web Center are:</p> <ul style="list-style-type: none"> <li>▪ Supervisors can monitor call center queue status via a web browser from anywhere on the LAN, WAN, or Internet.</li> <li>▪ Web Center displays real-time information that includes the number of queues and queued callers, current average wait time, the number of active inbound and outbound calls, the number of agents who are logged in and a variety of other statistics.</li> </ul>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<ul style="list-style-type: none"> <li>▪ Specific agent information such as log in ID, time of login and logout, current state (busy, wrap-up, available, or other user-defined states) and the start time of the current state are all available real-time.</li> <li>▪ Supervisors can provide instant communication: Screen pops broadcast messages to all local and remote agents.</li> <li>▪ Supervisors can view or even take control of an agent’s screen.</li> <li>▪ Supervisors can now view any reports that have been provisioned by the administrator.</li> </ul>
1.284	The Offeror ACD solution shall include customized codes not limited to: agent not ready codes and line of business codes.	Y	
1.285	The Offeror shall ensure that answer supervision techniques are used which accurately detect the condition of the remote end device (i.e., on-hook / off-hook).	Y	
1.286	The Offeror shall supply an ACD-based Workforce Management solution that includes, but is not limited to the following features: forecasting, adherence management, web enabled, staff scheduling and reporting/scorecards.	Y	
1.287	The Offeror shall provide samples of all reports available for group, agent, trunk groups, and trending reports.	Y	<p>A sample document containing all standard reports has been supplied to the Commonwealth for review.</p>  <p>Web Center Reports.pdf</p>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.288	<i>The Offeror shall describe its ability to run ACD reports remotely.</i>	Y	<p>Web Center Reporting is a real-time reporting engine that can be accessed from any location via a user-friendly graphical interface. Web Center is accessed via an internet browser allowing users remote access of reports. The reporting engine of Web Center is flexible and allows users to accomplish the following:</p> <ul style="list-style-type: none"> <li>▪ Standard templates are available for full customization.</li> <li>▪ Users can define and run single report capabilities on the fly</li> <li>▪ With multiple reporting views users can control the data extraction into specific reports.</li> </ul>
1.289	The Offeror shall provide the ability to run ACD reports remotely.	Y	
1.290	PBX and Key Systems		
1.291	The Offeror installed PBX systems must include and support: VOIP, inherent ISDN (integrated service digital network), ACD, and SMDR (station message detail recording), IVR (Interactive Voice Response) capabilities, T-1 (DS1)/DS3 compatible, PBX/MLTS 9-1-1 calls must support location information (minimum of building and floor location of caller) and station identification level and must be capable of enabling Telephony Services Application Programmers Interface (TSAPI) or Telephone API.	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.292	The Offeror installed PBX systems must be equipped to allow remote administration for all PBX's furnished under this contract.	Y	
1.293	The Offeror's PBX/KEY systems must have a minimum redundancy level of duplicate central processing units, RAM memory and power supply. The redundant system must be capable of "hot swapping," that is, the ability to change integral parts without any loss of service.	Y	
1.294	The Offeror's PBX/KEY system must be configured non-blocking and provide a platform with open face specifications which will allow intra and inter-network videoconferencing and future advances in technology without requiring non-affected elements to be replaced.	Y	
1.295	The Offeror shall provide remote maintenance 24/7 that includes monitoring of the PBX for minor and major alarms. A technician will be dispatched for all alarms not cleared remotely, and the local site will be notified.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.296	Toll-free Services		
1.297	The Offeror shall provide an implementation plan for toll-free services to make the proposed services fully operational.	Y	
1.298	Toll-free services must seamlessly integrate into existing telecommunications systems as to avoid impact to users.	Y	
1.299	The Offeror shall provide a detailed description of its network architecture (including single points of failure), call routing plan, network protection, and disaster recovery plan for inbound toll-free services.	Y	
1.300	The Offeror shall ensure the reliability of all toll-free services.	Y	
1.301	<i>The Offeror shall describe how all of the toll-free lines will be monitored and backed up.</i>	Y	Verizon Toll Free Services are delivered via redundant DMS-250 switches. Redundancy is supported on two levels: backup to the switches themselves and backup for the network between our switches. Each DMS-250 has two fully redundant processors controlling the switch. If one processor fails, the other immediately takes over, preventing calls from being dropped and the switch from going out of service. In addition, the Nortel DMS-250s are extremely reliable. The mean time between failure (MTBF) for a complete hardware failure (that is, the switch completely shuts down) is 14 minutes in 40 years, meaning that the switches almost never fail as a practical matter. The MTBF for 24-channel trunk groups (T-1s) is 220 minutes in 40 years and the MTBF for a single telephone line is 168 minutes in 40 years.

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			<p>Verizon also maintains generators and batteries at each switch site in the event of a power loss. The generators can supply power as long as fuel is available, and the batteries have eight hours of capacity. To reduce the chance of link failures, Verizon maintains at least two physically separate and diverse links between switches. Each switch location is also equipped with digital cross-connects so that calls can be routed to another switch or link in the event of a failure. Verizon also maintains at least two, and in most cases three, physically separate and diverse links for SS7 connections between locations.</p>
1.302	<p><i>The Offeror shall describe alternate means of service delivery for toll-free services in the event of a failure.</i></p>	Y	<p>Verizon offers Network Call Redirect and Toll Free Guardian services as alternate means of service delivery for toll-free services in the event of a failure.</p> <p>Network Call Redirect (NCR) an alternate means of service delivery, works in conjunction with a feature called Real-Time Restoration (RTR) (as well as with other re-routing capabilities) to allow customers to set up predetermined routing as a preparatory measure for emergencies. It allows them to prepare a secondary termination point; (usually outside of the current termination footprint but belonging to the customer). In cases where a call will not reroute around a failure, RTR can “override” the pre-defined plan and be activated in near real time to re-route calls to the next safest termination point. NCR covers situations where the local service provider or reseller has under provisioned access trunks, where the inbound call center has reached capacity, or the customer is experiencing some kind of local or network failure. Another example is load balancing when lines are busy at one site, or there are no available agents to take the calls. The NCR ensures callers get through.</p> <p>Toll-free Guardian guarantees the customer an alternative routing arrangement for domestic Verizon toll-free Service. If a Verizon toll-free customer is unable to receive toll-free service calls for any reason, Verizon will at the customer's option, provide one of the following services for the toll-free number that has experienced the failure. If the toll-free number (s) is out of service, Verizon will re-route traffic to another existing business line or a toll-free dedicated line, (alternate route plans must be in place) or if the customer does not have another existing toll-free termination to accept calls from the affected service, Verizon will establish a new business line termination and re-route the affected service to this new temporary alternate line. The customer must supply an existing phone number; or regardless of the type of toll-free line that is out of service, Verizon will re-route to a standardized prerecorded message explaining service conditions and requesting callers to call back later. This feature is designed solely to explain service conditions and provides no media-related or other information or service. Calls will terminate after the selected message.</p>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.303	The Offeror shall provide switched and dedicated services.	Y	
1.304	The Offeror shall provide a hosted IVR solution for toll free services.	Y	
1.305	The Offeror shall provide toll-free service that provides, at minimum, equal feature functionality that currently exists.	Y	
1.306	<i>The Offeror shall describe additional toll-free features and functionalities available to the Commonwealth.</i>	Y	<p>The following features are available with Verizon’s Toll Free Service.</p> <p><b>Time of Day/Time Interval Routing</b></p> <p>Time of day routing is based on the time of day. This feature allows the Commonwealth to route calls made from a single 8XX number to different answering locations.</p> <p><b>Time Interval Routing</b></p> <p>Time interval routing enables customers to route calls made to a single toll free number to different answering locations based on the time of day. This feature provides the Commonwealth with the ability to route calls based on their schedules. It also provides the Commonwealth with the ability to accommodate after-hours traffic.</p> <p><b>Day of Week Routing</b></p> <p>Day of week routing allows customers to arrange for calls to a single toll free service telephone number to be routed to different locations based on the particular day of the week. The customer can establish a different routing arrangement for each day of the week with a maximum of seven-day types.</p> <p><b>Exchange Routing</b></p> <p>Exchange routing allows the Commonwealth to define two or more originating routing groups and to arrange that calls to a single toll free number placed from different routing groups will terminate at different locations.</p>

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p><b>Geographic/Point of Call Routing</b></p> <p>The Commonwealth can route calls made to a single toll free number to different terminating locations based on each call's point of origin (defined by international toll free country, state, area code, or area code and exchange). Point of call routing is defined after extended call coverage and tailored call coverage has been established.</p> <p><b>Percentage Allocation Routing</b></p> <p>Percentage allocation routing distributes calls to a single toll free number to two or more answering locations, based on the Commonwealth-designated percentage distribution. The customer can define up to 99 allocation percentages per time slot. This feature provides customers with the ability to route calls based on staffing levels.</p> <p><b>Supplementary Codes</b></p> <p>Two types of supplementary codes are available: Account codes or identification (ID) codes. With both types of codes, calls cannot be completed without entry of the specified codes. In addition, with ID codes, the calls are not completed until codes are verified for accuracy. As an option, supplementary codes can be sorted on the call detail.</p> <p><b>Alternate Routing</b></p> <p>Alternate routing allows the Commonwealth to pre-define alternate routing arrangements that can be activated upon command in the event of a customer emergency, such as power outages, natural disasters, or other service disruptions.</p> <p>The Commonwealth can pre-define up to 99 alternate routing plans per toll free number.</p> <p><b>Tailored Call Coverage/Call Area Selection</b></p> <p>This feature blocks incoming calls from one or more specific originating areas at the domestic NPA or state level. Blockage from multiple originating areas is available at no additional charge.</p> <p><b>Day of Year/Holiday Routing</b></p> <p>Day-of-year routing arranges for calls to a single toll free service telephone number to be routed to different locations based on a customer-specified holiday or key event.</p>

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p><b>Dialed Number Identification Service (DNIS)</b></p> <p>Dialed Number Identification Service (DNIS) permits the Commonwealth with multiple inbound service telephone numbers terminating in the same location to identify the specific toll free service telephone number that was dialed by the calling party. DNIS is available to dedicated terminations only. The Commonwealth can request up to 1,500 DNIS designations per trunk group; above 1,500 designations, requests will be handled on an individual case basis.</p> <p><b>Multi-Manager/Multi-Carrier Service</b></p> <p>Multi-Manager is available to customers who split toll free traffic between Verizon and other carriers. This feature is available only on toll free numbers for which Verizon is the controlling Resp Org, and for which complex routing records are utilized in the SMS/800 Database.</p> <p><b>Transition Manager</b></p> <p>Transition Manager allows a customer to migrate toll free traffic to a carrier in percentages. This feature is for customers wishing to transition 100% of traffic to Verizon in a controlled manner. The migration is controlled through percent allocation, which is increased over an agreed-upon timeframe.</p> <p><b>Disaster Recovery Plan</b></p> <p>The Disaster Recovery Plan allows a customer to migrate 100% of traffic to a pre-defined carrier under a pre-defined plan in the event of an outage.</p> <p><b>Disconnect Message Referral</b></p> <p>Disconnect Message Referral (DMR) provides customers who disconnect or change a toll free number with a recording.</p> <p><b>Network Call Redirect</b></p> <p>Network Call Redirect (NCR) allows a customer to control potential congestion of calls by sending overflow calls to a pre-determined alternate routing group (Dedicated Access Termination, Business Line Termination, or Switched WATS Termination) via a customer-defined Routing Table when the intended call termination is busy.</p>



Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.307	The Offeror shall ensure online reports for toll free services are available hourly, daily, weekly and monthly.	Y	
1.308	<i>The Offeror shall describe how it will publicize, advertise and maintain the designated listings of toll-free numbers to the public.</i>	Y	National Toll Free Listing allows the Commonwealth to advertise up to nine different listings per toll free number within the 800-555-1212 database. This information is housed and maintained within the National Toll Free Directory.
1.309	The Offeror shall provide a detailed description of each basic 800 service feature and how it functions.	Y	
1.310	The Offeror shall provide a detailed implementation plan describing all activities (to include but not limited to downtime, equipment additions, pre-implementation staging, resource requirements, pre/post implementation technical assurance) that are necessary to successfully make operational the full scope of 800 Toll Free Service.	Y	
1.311	The Offeror shall deliver a solution that supports the Commonwealth's routing of Information and Referral requests from its citizens that dial	Y	

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	N-1-1. (i.e. 8-1-1 and any additional numbers that will be available to the Commonwealth) including the transfer of a caller to the designated public safety answering point.		
1.312	<i>The Offeror shall describe how calls to N-1-1 can be routed free of charge to designated Commonwealth answering points.</i>	Y	Originating and terminating N-1-1 calls within the Centrex would be routed free of charge to designated Commonwealth answering points. Also, N-1-1 calls that are local calls would be free of charge.
1.313	Messaging and Voice Mail Services		
1.314	The Offeror shall provide a station message detailed recording (SMDR). The system must also be able to furnish, at a minimum, station, account, trunk and summary reports.	Y	
1.315	The Offeror's voice message solution shall provide adequate protection against unauthorized access and hacker fraud.	Y	
1.316	The Offeror's voice mail system shall allow Commonwealth administrators the ability to reset voice mail passwords.	Y	

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1.317	The Offeror shall provide both audible and visual message waiting indicators.	Y	
1.318	<i>The Offeror shall describe how it will identify and address Phantom/Ghost mailboxes.</i>	Y	The requirement for Phantom/Ghost mailboxes will be met by Verizon's National Unified Messaging Service (NUMS) voice mail platform, using the Extension Mailbox type. Extension Mailboxes allow multiple mailboxes in a single mailbox and are available with Standard, Enhanced and Information Only mailboxes.
1.319	The Offeror shall provide voice mail reports consisting of, but not limited to, the following fields: User Name, Bill Group Name (with the ability to sort by agency), Mailbox Name and Number, System Access Count by Number, Pager (including the time messages were sent to a pager), number of times mailbox accessed, number of times callers zero out of mailbox, number of times a mailbox is full, message aging by mailbox and un-initialized mailboxes (including date installed).	Y	
1.320	Telecommunications Service Priority (TSP) Program		
1.321	The Offeror shall participate in the Telecommunications Service Priority (TSP) program.	Y	

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1.322	The Offeror shall prioritize TSP circuits per federal regulations and mark applicable circuits as TSP within its system, to provide easy identification when a trouble ticket is called in.	Y	
1.323	VOIP and Video Services		
1.324	<i>The Offeror shall describe features and functionalities included as part of its secure VOIP solution.</i>	Y	<p>Verizon's Voice over IP (VoIP) portfolio of products provide customers the ease and efficiency of one network for both voice and data services.</p> <p><b>Call Types</b></p> <p><b>Outbound Long Distance Calls</b></p> <p>Offers network gateways to the Verizon long distance telephone network, allowing the customer to complete off-net calls. Voice and data calls over one network</p> <p><b>Outbound Local Calls (Network-Based)</b></p> <p>Customers can dial local calls from their Session Initiation Protocol (SIP) phone or public switched telephone network (PSTN) phone. Replaces the need for a connection to the Local Exchange Carrier (LEC).</p> <p>Users can have a Direct Inward Dialing (DID) number (public phone number) assigned to their SIP phone or a PBX phone behind an Enterprise gateway. Local number portability will also be supported. Allows VoIP customers to place local, long distance, and data services over the same facilities in Verizon local areas.</p> <p><b>Outbound Local Calls (Customer Premises Solution)</b></p> <p>Customers who are outside the Verizon VoIP local footprint can deploy a Cisco enterprise gateway on their premises, which enables them to dial local calls.</p> <p>A user can have a direct inward dial (DID) number (public phone number) assigned to their phone behind an Enterprise gateway. Local number portability will also be supported. Local inbound and outbound calls supported.</p>

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			<p><b>Inbound 8XX Calls</b>                      Basic toll-free routing and termination. Enhanced toll-free routing capabilities are not supported.                      Calls are rated at standard toll-free rates. Bills and reporting generated via standard toll-free systems.</p> <p><b>Dedicated Toll Free</b>                      With Dedicated Toll Free, the customer's Toll Free numbers terminate to the VoIP platform and are converted to Toll Free Nodes Based Routing.                      With this service, VoIP customers realize even greater cost savings with reduced Dedicated Toll Free rates.</p> <p><b>Fax</b>                      Support for fax pass-through. Fax can route over the same pipe as voice and data. Analog adaptor required.</p> <p><b>Remote calling into private dial plan</b>                      Ability to set up a remote call in number for private dialing plan (i.e., 1-800-USE-VNET).</p> <p><b>Access Types</b></p> <p><b>Internet Dedicated Access (IDA)</b>                      IDA speeds available include T1 and T3 Internet Dedicated. Allows current Verizon Internet customers to use the investment in their existing network and migrate other services to this network.</p> <p><b>Internet Dedicated Access (IDA) Shadow T1</b>                      Internet Dedicated T1 Shadow is a redundant service option that provides an automatic back-up connection in the event of primary T1 failure.</p> <p><b>Private IP</b>                      Private IP enables companies to share information across a private IP backbone in a secure environment. Private IP service integrates the capabilities of layer 2 switching (ATM and frame relay) and layer 3 routing (IP) and evolves frame relay and ATM into IP-based services.</p>

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			<p><b>Compression</b></p> <p><b>G. 711 Codec Support</b>                      Uncompressed voice (includes the bandwidth needed for frame or IP headers). Total quality voice.</p> <p><b>G.729 and G.729A Codec Support</b>                      Compressed voice using the G.729 and G.729A codec (includes frame relay and/or IP headers). Requires less bandwidth per call, while still maintaining good call quality.</p> <p><b>Network Features for Subscribers</b></p> <p><b>Anonymous Call Rejection</b>                      Enables a subscriber to reject calls from anonymous parties who have explicitly restricted their Caller ID. By activating the service via the Subscriber Web Interface, callers without available caller identification are informed that the subscriber is not accepting calls at that time. The subscriber's phone does not ring and the subscriber sees or hears no indication of the attempted call. This service does not apply to intra-location calls.                      Only deliberate anonymous numbers are rejected. Callers whose numbers are unavailable are not rejected. Callers that are rejected are informed that the called party is not accepting calls from unidentified callers. ("The party you are trying to reach is not accepting calls at this time.")</p> <p><b>Alternate Numbers</b>                      Enables an administrator to configure up to two additional phone numbers and/or extensions to a subscriber. Normal ringing is provided for incoming calls to the primary phone number and subscribers have the option of enabling a distinctive ring for calls to their second and third phone numbers. If distinctive ringing is enabled, distinctive call waiting tone will also apply. For outgoing calls from the subscriber, the subscriber's primary phone number is the calling line identity. Allows subscribers to manage three incoming lines.</p> <p><b>Automatic Callback</b>                      The Automatic Callback (ACB) service allows users to monitor a busy party and automatically establish a call when the busy party becomes idle.</p>

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			<p>Upon reaching a valid ACB busy condition, the user will hear an announcement asking if they would like to monitor the line and be called back when it is idle. To activate ACB, the subscriber enters the digit prompted for then goes on hook. As soon as the called party becomes idle again, ACB attempts to re-establish the call between the subscriber and the previous busy party.</p> <p>The ACB service can only be activated against a destination within the same group. Subscribers can automatically call back a user when they are available.</p> <p><b>Blind Call Transfer</b></p> <p>Enables a subscriber to transfer a call unattended before or after the call is answered. Subscribers can only execute blind call transfer from the Communication Manager.</p> <p><b>Call Blast – Personal</b></p> <p>Call Blast enables subscribers to have multiple phones ring simultaneously when any calls are received on their VoIP phone number. The first phone to be answered is connected. Caller can also select to have simultaneous devices not ring while already on a call or ring on all incoming calls.</p> <p>Subscribers can receive incoming calls at all possible locations and without having to set up routing to different devices.</p> <p>For example, calls to a subscriber's desk phone could also ring the subscriber's mobile phone, in case they are not at their desk.</p> <p><b>Call Forwarding Always</b></p> <p>Enables a subscriber to redirect all incoming calls to another phone number. If activated, a subscriber must specify the forwarding number. A status indicator on the Communication Manager identifies whether this service is enabled. Subscribers can also make their office phone emit a short ring burst to inform they are next to their phone when the call is forwarded by using the Ring Reminder.</p> <p>Same feature functionality as PBX/Centrex. Subscribers can easily redirect all incoming calls by dialing a feature code or configuring the service via the Subscriber Web Interface.</p> <p><b>Call Forwarding Busy</b></p> <p>Enables a subscriber to redirect calls to another destination when an incoming call encounters a busy condition. If activated, a subscriber must specify the forwarding number.</p>

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			<p>Same feature functionality as PBX/Centrex. Subscribers can easily route calls to another number if their line is busy; feature can be activated/deactivated either by dialing a feature code or configuring the service via the Subscriber Web Interface.</p> <p><b>Call Forwarding – Multi-Phone</b>                      Multi-Phone call forwarding allows an end-user to specify a different forwarding number for each entry of Selective Call Forwarding.                      Allows a subscriber to have multiple numbers used for call forwarding.</p> <p><b>Call Forwarding No Answer</b>                      Enables a subscriber to redirect calls to another destination when an incoming call is not answered within a specified number of rings. If activated, a subscriber must specify the forwarding number and the number of rings before forwarding.</p> <p>Same feature functionality as PBX/Centrex. Subscribers can easily route calls to another number if they don't pick up; feature can be activated/deactivated either by dialing a feature code or configuring the service via the Subscriber Web Interface.</p> <p><b>Call Forwarding Selective</b>                      Enables a subscriber to define criteria that causes certain incoming calls to be redirected to another destination. If an incoming call meets subscriber specified criteria, the call is redirected to the subscriber specified destination. A criteria set is based on incoming calling line identity, time of day, and day of week. Multiple criteria sets can be defined.                      All criteria must be met for a call to be forwarded in this scenario. If all criteria are not met, the call is delivered as if service was not available. Up to 12 incoming numbers can be defined for forwarding.</p> <p>Same feature functionality as PBX/Centrex. Subscribers can easily route selected calls to another destination and control the service via the Subscriber Web Interface, which provides the ability to set the forwarding destination address and the criteria sets for determining which calls require forwarding.</p> <p><b>Call Notify</b>                      Enables a subscriber to define criteria that causes certain incoming calls to trigger an e-mail notification. If an incoming call meets subscriber specified criteria, an e-mail (or short message to a cell phone) is sent to the notify address informing the subscriber of the details of the incoming call attempt. A criteria set is based on incoming calling line identity, time of day and day of week. Multiple criteria sets can be defined.</p>

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			<p>Subscribers can take advantage of e-mail to identify incoming calls and control the service via the Subscriber Web Interface, which provides the ability to set the notify e-mail address and the criteria sets for determining which calls trigger a notification.</p> <p><b>Call Park</b></p> <p>Enables a subscriber to put a call on hold and then retrieve it from another station within the call pick-up group.</p> <p>To park a call, a subscriber depresses the flash hook and dials the call park feature code. The call is parked and the caller is held.</p> <p>To retrieve the call, the subscriber goes to any phone in the call pick-up group and dials the call retrieve feature code, followed by the subscriber's extension. The call is retrieved and connected to the retrieving subscriber. Subscribers can also execute call park via the Communication Manager.</p> <p>Same feature functionality as PBX/Centrex. Subscribers can pick up calls from other stations within the call pick-up group.</p> <p><b>Call Pickup</b></p> <p>Enables a subscriber to answer any ringing line within their pick-up group. The administrator sets up the pick-up group which defines the set of subscribers to which the call pickup feature applies.</p> <p>Subscribers can pick up a ringing call, using the call pick-up feature code. The subscriber is then connected to the caller. If more than one line in the pick-up group is ringing, the call that has been ringing the longest is answered. Subscribers can also execute call pick-up via the Subscriber Web Interface.</p> <p><b>Call Pickup – Directed</b></p> <p>Enables a subscriber to answer a call directed to another phone in their pick-up group by dialing the respective feature access code followed by the extension of the ringing phone.</p> <p>This allows subscribers to pick up a call that is ringing at specific extension.</p> <p><b>Call Pickup – Directed with Barge-in</b></p> <p>Directed Call Pickup with Barge-in (DPUBI) allows users to dial a feature access code (FAC) followed by an extension to pickup (answer) a call directed to another user in the same customer group, or barge-in on the call if the call was already answered. When a barge-in occurs, a three-way call is established between the parties with the DPUBI user as the controller.</p>

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			<p>Subscribers can configure themselves as barge-in exempt so their calls can not be barged in on.</p> <p>Allows a user to barge-in on the call when the call the call was already answered.</p> <p><b>Call Return</b></p> <p>To call back the last party that called, the subscriber dials the call return feature code. The system stores the number of the last party to call, and connects the subscriber to that party.</p> <p>Enables a subscriber to call the last party that called, whether or not the call was answered. Subscribers can also execute call return via the Communication Manager.</p> <p><b>Call Screening by Digit Pattern</b></p> <p>Enables subscribers to specify digit patterns instead of individual phone numbers on the following selective services: Selective Call Forwarding, Selective Call Acceptance, Selective Call Rejection, Call Notification, and Priority Alert. Digit patterns consist of a sequence of digits followed by the * wildcard. For example, 240* would apply to any calls from phone numbers starting with 240.</p> <p>Also enables use of the "?" wildcard character in specifying digit patterns. The "?" wildcard character represents any single digit (0-9) and may be used multiple times anywhere within a digit string. The "?" wildcard may be used with or without the * wildcard at the end of the digit string.</p> <p>If the calling number is not available, the caller will get a network announcement that says, "The party you are trying to reach is not accepting calls at this time."</p> <p>Subscribers do not need to identify specific numbers to screen but instead can screen by patterns.</p> <p><b>Call Transfer with 3-Way Consultation</b></p> <p>To initiate Call Transfer with 3-way Consultation, the subscriber depresses the flash hook and dials the add-on party. When the call is answered, the subscriber depresses the flash hook and forms a three-way call with the add-on party and caller. To transfer, the subscriber hangs up causing the caller to be connected to the add-on party. Subscribers can also execute call transfer with three-way consultation via the Communication Manager.</p>

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			<p><b>Call Waiting Enhancement</b></p> <p>When a second call is received while a subscriber is engaged in a call, the subscriber is informed via a call waiting tone. If using IP Phones, there is also an indicator on the phone. To answer the waiting call, the subscriber depresses the flash hook. The subscriber connects with the waiting party and holds the original party. By depressing the flash hook, the subscriber reconnects to the original party and holds the waiting party. The feature completes when any party hangs up. Subscribers can also execute call waiting via the Communication Manager.</p> <p>Enables a subscriber to answer a call while already engaged in another call.</p> <p><b>Calling Line ID Blocking</b></p> <p>The subscriber controls the service via the Subscriber Web Interface, which provides the ability to activate and deactivate the service. If activated, all calls made by the subscriber have the subscriber's identity blocked.</p> <p>Calling Line ID Delivery Blocking allows subscribers to block their number from being shown when calling other numbers except for intra-site calls which will always display the calling line ID. The feature can be enabled for all calls or it can be enabled selectively using the feature access codes.</p> <p>Subscribers can block delivery of his/her identity when they make all outbound calls.</p> <p><b>Calling Line ID Blocking per Call</b></p> <p>In addition to being able to block the presentation of their Calling Line ID on all outgoing calls, subscribers also have the option of blocking on a per-call basis by dialing a feature code before making the call.</p> <p>Subscribers can block delivery of his/her identity when they make specific outbound calls.</p> <p><b>Cancel Call Waiting/Call Waiting per Call</b></p> <p>Allows subscribers with Call Waiting to deactivate/activate the operation of Call Waiting via the Subscriber Web Interface.</p> <p>In addition to being able to cancel call waiting for all incoming calls, subscribers also have the option of canceling their call waiting on a per-call basis by dialing a feature code before making the call, or after a switch-hook flash during the call. Additional call waiting delivery.</p>

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			<p><b>Communication Manager</b></p> <p>The following features are included with the Communication Manager:</p> <ul style="list-style-type: none"> <li>▪ Click-to-Dial Enables subscriber to input and dial a number, dial directly from a drop-down Phone List (Personal, location directory or Call Log) or Outlook tab, or click the Redial button.</li> <li>▪ Talk Enables subscriber, who is already engaged in call, to answer another waiting call. When available, Calling Line ID is displayed with caller's name (if available Dependent on names in the contact list and on-net status) and number.</li> <li>▪ Call Hold/Retrieve Enables subscriber to place an existing call on hold for an extended period of time, and then retrieve the call to resume conversation. While the calling party is held, the subscriber may choose to make a consultation call to another party.</li> <li>▪ Call Transfer Enables subscriber to redirect a ringing, active, or held call to another number or directly to voicemail. Before transferring the caller, the subscriber may choose to consult with the third party first or establish a three-way consultation.</li> <li>▪ Conference Enables subscriber to establish a three-way call involving two other parties.</li> <li>▪ Hang up Call Enables subscriber to disconnect a call that has been answered.</li> <li>▪ Configure Services Buttons are provided to enable subscriber to turn on/off frequently used services such as Call Forwarding Always and Do Not Disturb.</li> <li>▪ Provides a web-based tool for Subscribers to invoke their services, as an alternative to using feature codes or depressing the flash hook.</li> </ul> <p><b>Communication Manager Express</b></p> <p>Enables users to pre-configure multiple profiles for managing incoming calls differently based on the subscriber's status:</p> <ul style="list-style-type: none"> <li>▪ Available In the Office</li> <li>▪ Available Out of the Office</li> <li>▪ Busy</li> <li>▪ Unavailable</li> <li>▪ Each profile includes preferences for managing the relevant incoming call functions (e.g., Call Forwarding (busy, no answer, always, selective), Simultaneous Ringing, Call Notify), which can be configured through a single easy-to-use web page or via the telephony user interface.</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Enables users to more quickly and easily change the way they receive their incoming calls. In conjunction with the telephony user interface, it provides a power solution for mobile users.</li> </ul> <p><b>Consultation Hold</b></p> <p>To initiate consultation hold, the subscriber depresses the flash hook and dials the add-on party. When the call is answered, the subscriber can consult with the add-on party. To drop the add-on party and reconnect to the original party, the subscriber depresses the flash hook twice. Subscribers can also execute consultation hold from the Communication Manager.</p> <p>Enables a subscriber to put the caller on hold, and make a consultation call to another party.</p> <p><b>Distinctive Alert/Ringing</b></p> <p>This is a feature of the Priority Alert and Alternate Number capabilities. When setting the Priority Alert capability on, a distinctive ring will be given to those priority numbers. Likewise, when the Alternate Number feature is enabled, the user has the option of requesting a Distinctive Ringing when receiving a call from one of the Alternate Numbers.</p> <p>Distinctive ring is supported on the Cisco 7912, 7940, and 7960 IP phones. This feature is not supported for PSTN phones that utilize the Mediatrix Analog Gateway nor is it supported on the Uniden 200 IP phone.</p> <p>Provides a different call waiting tone (i.e., alert) or a different ringing cadence for Priority Alert and Alternate Numbers calls.</p> <p><b>Do Not Disturb</b></p> <p>Allows subscribers to set their station as unavailable so that incoming calls are given a busy treatment. Subscribers have the option to activate and deactivate the service by dialing a feature code or configuring the service via the Subscriber Web Interface. A status indicator on the Communication Manager identifies whether this service is enabled.</p> <p>Subscribers can choose to receive no incoming calls during the time when their "do not disturb" functionality is activated.</p>

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			<p><b>Extension Dialing</b></p> <p>Enables subscribers to dial extensions via their Communication Manager or phone to call other Subscribers at their location.</p> <p>Subscribers can more easily contact other subscribers at their site.</p> <p><b>Find Me – Personal</b></p> <p>This is a feature that used to be supported and is now available again. This service sequentially attempts up to five phone numbers (in addition to, optionally, the base location) to reach the user.</p> <p>Upon triggering the Sequential Ring service, the callers are played an announcement stating to hold while the system is attempting to reach the user. The callers are then provided with ringback and comfort announcements, in sequence.</p> <p>The service sequentially tries the configured numbers until an answer is received, at which point the call is connected as usual.</p> <p>If all numbers are tried without receiving an answer, the caller is redirected to an overflow destination like voice mail. There is also an option to allow the caller to press a key to skip the search process.</p> <p>Subscribers who prefer to have the system find them in a priority order may prefer this service over call blast.</p> <p><b>Flash Call Hold</b></p> <p>Enables subscribers to hold a call for any length of time by flashing the switch-hook on their phone and dialing the respective feature activation code. Parties are reconnected again when the switch-hook is flashed and the feature activation code is dialed again.</p> <p>To enable the feature subscribers flash the phone (press the flash button or press the hang up button once), dial the feature access code, and make the second call. The subscriber flashes the phone to toggle between the calls.</p> <p>Subscribers can use call hold functionality from any phone; even one without robust call control functionality.</p> <p><b>Inbound Caller ID</b></p> <p>Delivered information includes the caller's phone number. The information is delivered to the Subscriber Web Interface and the phone (if capable) only if the information is available and has not been blocked by the caller.</p>



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			<p>Enables subscribers with Calling Line ID Blocking enabled to allow the delivery of their Calling Line ID on a specific call by entering the respective feature code (*65 default). Once the call is over, Calling Line ID Blocking is restored.</p> <p>Calling Party Name Delivery is available for On-Net calls to a SIP phone from another on-net SIP device.</p> <p>Subscribers can choose to take a call when they see the caller's identity via the Communication Manager and phone (if capable).</p> <p><b>IP Phone Support</b></p> <p>Subscribers can use SIP phones.</p> <p>SIP-based IP phones from Cisco, Polycom, Aastra and Uniden are supported by VoIP, in addition to basic analog and digital PBX phones.</p> <p><b>Last Number Redial</b></p> <p>Enables Subscribers to redial the last number they called by clicking the 'Redial' button on their Communication Manager or by dialing a feature code (e.g., *66).</p> <p>Easy-to-use last number redial.</p> <p><b>Multi-Path Forwarding</b></p> <p>There are no limitations on the number of simultaneous calls a subscriber can forward. Calls are specified for forwarding via the web portal interface.</p> <p>Enables a subscriber to have more than one forwarded call active at a time.</p> <p><b>Outbound Caller ID</b></p> <p>Originating location sends Billing Telephone Number (BTN) of caller. Currently, station level Automatic Number Identification (ANI) is not available.</p> <p>Originator ensures that receiver can identify caller and will not reject the call.</p> <p><b>Outlook Integration</b></p> <p>This service enables subscribers to integrate their personal contacts in Microsoft Outlook with their Communication Manager. Using the Outlook Contacts tab in the Communication Manager, subscribers can perform a search of their personal Outlook contacts by name or company. Once the desired contact is located, subscribers may click-to-dial one of the contact's phone numbers or the subscriber may choose to display the contact's v-card by clicking their name.</p>

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			<p>All the Outlook contact information is pulled directly from the subscriber's personal Outlook files. Essentially the Communication Manager, a java-based program, pulls all the appropriate information from the Subscriber's Microsoft Exchange server or personal computer (PC) each time they log onto Communication Manager. The Outlook contact info is automatically refreshed when the Communication Manager is accessed. Subscribers can also manually refresh it with a simple point and click on the Communication Manager screen. Verizon suggests less than 1000 contacts in any single folder for optimal performance.</p> <p>Subscribers can leverage their office tools-VoIP and Outlook-for easier contact management.</p> <p><b>Personalized Name Recording</b></p> <p>Name recording in conjunction with Auto Attendant. A .WAV file is recorded via phone and then uploaded via the Verizon Enterprise Center Personal Dashboard web screen. Enables subscribers to record their name to be played back to incoming callers.</p> <p><b>Phone List – Group</b></p> <p>Each subscriber added to the location is automatically added to this group list. Also included are the extensions for reaching the Auto Attendant(s), and Hunt Group(s), when applicable. Using the Common Phone List Feature, the administrator can add additional phone numbers to the Group List by either adding them individually via their web portal or by importing them from a file. This flexibility would allow the administrator to create a directory that lists all Subscribers in the entire enterprise. The list can not be edited by Subscribers but it can be searched.</p> <p>This phone list enables subscribers to dial other member of their enterprise by selecting from a list of names on their Communication Manager. The list also serves as a searchable company directory, listing names, numbers and e-mail addresses.</p> <p><b>Phone List – Personal</b></p> <p>Each subscriber can add, delete, edit and re-order numbers in their Personal Phone List, which serves as a personal speed dial list. Subscribers can add multiple numbers to this list by uploading them from a flat file.</p> <p>Enables subscribers to dial frequently called numbers by selecting from a searchable list of names on their Communication Manager.</p>

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			<p><b>Phone List – Call Log</b></p> <p>The call log is accessed through the Communication Manager and includes the most recent numbers registered for each category, as well as the respective call times and dates.</p> <p>The Call Log enables subscribers to view and dial from the following lists of stored numbers: missed, received, and dialed.</p> <p><b>Printable Group Directory</b></p> <p>The business group and contact information is displayed in one of two formats: Summary or Detailed. The Group Directory is accessible from the Verizon Customer Center Administrator Dashboard Portal or via each Subscribers Communication Manager.</p> <p>Enables subscribers to view and print a directory listing of all the enterprise members included in the group directory that was set up by their administrator. All their respective contact information (e.g., extension, mobile phone number, e-mail address) would be included.</p> <p><b>Priority Alert/Ringing</b></p> <p>The subscriber sets the criteria (e.g., incoming calling number, time of day, and day of week) for determining which calls require priority notification via their Verizon Enterprise Center Personal Dashboard web interface. Multiple criteria sets, or profiles, can be defined.</p> <p>The criteria for each Priority Alert entry can be a list of up to 12 phone numbers or digit patterns, a time of day range and specified days of the week. All criteria for an entry must be true for the phone to ring with a different tone (phone number and day of week and time of day).</p> <p>Enables a subscriber to define criteria to have certain incoming calls trigger a different call waiting tone (i.e., alert) or a different ringing cadence than normal calls.</p> <p><b>Private Dial Plans</b></p> <p>Many corporate customers depend on private dial plans to facilitate intra-enterprise communications. Company can assign their own private number plan between locations. VoIP can support private numbers up to 32 digits or can utilize an existing DAP-based dial plan.</p> <p>Companies can create their own virtual phone network for ease of use and long distance cost savings.</p>

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			<p><b>Remote Office</b></p> <p>Enables subscribers to access and use their VoIP service from any end point, on-net or off-net (e.g., home office, mobile phone).</p> <p>This service is especially useful for tele-workers and mobile workers, as it enables them to use all of their Communication Manager features while working remotely (e.g., extension dialing, transfers, conference calls, Outlook Integration, directories, etc.). In addition, since calls are still originated from VoIP, the service provides an easy mechanism for separating personal and business phone expenses, as well as keeping alternate phone numbers private. This service must be set-up by the administrator.</p> <p><b>Ring Splash</b></p> <p>Enables subscribers to have a short ring burst played on their phone when the following services are triggered: Call Forwarding Always, Call Forwarding Selective, and Do Not Disturb. Ring Splash can be enabled for each of these services individually and serves as a reminder that the respective service is active.</p> <p><b>Selective Call Acceptance</b></p> <p>If an incoming call meets subscriber specified criteria, the call is allowed to complete to the subscriber. All other calls are blocked and the caller is informed that the subscriber does not wish to receive their call. The subscriber controls the service via the Subscriber Web Interface, which provides the ability to set the criteria sets for determining which calls are allowed to complete. A criteria set is based on incoming calling line identity, time of day, and day of week. Multiple criteria sets can be defined.</p> <p>Up to 12 phones numbers or digit patterns can be defined. All criteria must be met in order to be activated. If the calling party's ANI is not one of the numbers listed on the selective call acceptance list, the caller is played a standard recording, "The party you are trying to reach is not accepting calls at this time." Administrators can not modify the recording.</p> <p>Enables a subscriber to define criteria that causes certain incoming calls to be allowed.</p> <p><b>Selective Call Rejection</b></p> <p>If an incoming call meets subscriber specified criteria, the call is rejected. All other calls are accepted. The subscriber controls the service via the Subscriber Web Interface, which provides the ability to set the criteria sets for determining which calls require blocking. A criteria set is based on incoming calling line identity, time of day, and day of week. Multiple criteria sets can be defined.</p>

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			<p>Up to 12 phone numbers or digit patterns can be defined. All criteria must be met in order to be activated. If the calling party's ANI is one of the numbers listed on the selective call rejection list, the caller is played a standard recording, "The party you are trying to reach is not accepting calls at this time." Administrators can not modify the recording.</p> <p>Enables a subscriber to define criteria that causes certain incoming calls to be blocked.</p> <p><b>Shared Call Appearance</b></p> <p>All phones have the same extension on their phone and can view status of the line for all phones. Unlike alternate numbers which is a virtual termination, shared call appearance numbers must be physically provisioned on the subscribers phones.</p> <p>The first phone to be answered. If one of the phones is already hosting an active call under the Subscribers ID, incoming calls are delivered to the active phone and any outgoing calls from another phone using the same subscriber ID are blocked. Therefore if one of the users is on the Shared call Appearance extension the other users with the same extension will not be able to use the line. Example: Applications of this service include setting-up a second line for an executive assistant or in a secondary workspace (e.g., lab).</p> <p>Enables subscribers to have an incoming number ring on up to 35 phones simultaneously.</p> <p><b>Speed Dial</b></p> <p>If required, customers can request to have up to 100 frequently called numbers enabled for speed dial. Entry of the two-digit code is preceded by a configurable prefix: 0-9, A-D, *, or # (default). Subscribers can program the numbers in their directory via the Speed Dial page in their Verizon Enterprise Center Personal Dashboard web portal, or directly through their phone using the respective feature access code (*75 default).</p> <p>Enables subscribers to dial single digit codes to call up to eight different numbers. This feature is helpful for frequently dialed numbers or long strings of digits that are hard to remember.</p> <p><b>Telephony User Interface</b></p> <p>Enables subscribers to call from any phone and modify their call forwarding features, their Communication Manager Express features, or their Auto Attendant greeting. Administrators may also use the Telephony User Interface to record Auto Attendant greetings remotely.</p>

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			<p>Enables administrators and Subscribers to customize select features when they do not have Internet access.</p> <p><b>Telephony User Interface – Calling</b></p> <p>This feature enhances the Communication Manager Telephony User Interface by allowing an authenticated user to originate calls.</p> <p>Once the Telephony User Interface authenticates the user, the user makes calls as if they were originated from their normal location. This means that services such as OCP, account/auth code and voice VPN will apply on the outgoing calls made from the Telephony User Interface. This also means that accounting records will be generated against the user's account.</p> <p>The user can make as many calls as desired. The user can either wait for the remote party to hang up, or hit an escape sequence to originate a new call from the Telephony User Interface.</p> <p>This feature is particularly useful for traveling users that already access the Telephony User Interface to retrieve voice messages and configure services. Traveling users typically access the Telephony User Interface using a toll-free number and this feature allows them to originate calls that eventually get charged against their account. For similar reasons, this feature can be useful for the employee working at home that needs to make long distance or international calls on behalf of the company. Dialing in to the Telephony User Interface first allows the subsequent long distance call to be charged to the company instead of the user's home line.</p> <p><b>Three-Way Calling</b></p> <p>To initiate a three-way call while engaged in a regular two-party call, the subscriber depresses the flash hook and dials the third party. Before or after the third party answers, the subscriber depresses the flash hook and forms a three-way call with the two parties. To drop the third party, the subscriber depresses the flash hook and is reconnected with the original party in a regular two party call. If the subscriber hangs up, all parties are released. Subscribers also have the ability to execute three-way calls using the Communication Manager.</p> <p>Enables a subscriber to make a three-way call with two parties, where all parties can communicate with each other.</p>

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			<p><b>Voicemail</b></p> <p>Network-based voicemail is provided. Voicemail accounts can be set up to provide company, per department and per subscriber accounts. Voicemail can be retrieved via phone, website or even e-mail.</p> <p>Customer does not incur hardware cost for sophisticated voicemail features</p> <p><b>Network Features for Administrators</b></p> <p><b>Account Codes</b></p> <p>Enables the tracking of calls made outside of the location by prompting subscribers for an account code. With this service, codes are not validated (see Authorization Codes). Administrators manage their account codes via their Verizon Enterprise Center Location Dashboard web portal.</p> <p>Ability to manage costs and to generate revenue by providing the tools to bill back charges to clients.</p> <p><b>Administrator Web Dashboard</b></p> <p>Web portal that empowers a business administrator to provision services for subscribers, a location, or the entire enterprise.</p> <p>Allows administrator easy access to configure, manage and monitor features and settings.</p> <p><b>Attendant Console</b></p> <p>The web-based Attendant Console enables a subscriber (e.g., receptionist) to monitor a configurable set of subscribers. All must be built under the same location as the Attendant. The Attendant Console graphically displays subscribers status (busy, idle, do not disturb), as well as detailed call information. The Attendant Console window is integrated with the Communication Manager, thereby enabling the attendant to perform functions such as click-to-transfer or click-to-dial.</p> <p>View Call Information Option to view duration of monitored subscribers calls and name and number of parties that they are talking to.</p> <p>Receptionist can view detailed subscriber information and current status at a glance.</p> <p>Attendant Console can be quickly assigned to specific Subscribers with limited disruption and can scale to support multiple subscribers at a location.</p> <p>Attendant Console is always up to date with the most current list of Subscribers and extensions built under the location.</p>

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			<p><b>Authorization Codes</b></p> <p>Prompts subscribers for an authorization code when making calls outside of the location. Calls will not be connected unless a valid code is entered. Administrators manage their authorization codes via their Verizon Enterprise Center Enterprise Dashboard web portal. A subscriber can not have this service and the Account Codes service enabled at the same time.</p> <p>Ability to manage costs by limiting calling capabilities to subscribers with specifically-assigned access.</p> <p><b>Auto Attendant</b></p> <p>The Auto Attendant serves as an automated receptionist that answers the phone and provides a personalized message to callers with options for connecting to the operator, dialing by name or extension, or connecting to up to six configurable extensions (e.g., 1 = Marketing, 2 = Sales, etc.). Configuration via the Verizon Customer Center Administrator Dashboard web interface also allows for hours of operation to be modified, with different options available for hours that the company is open or closed.</p> <p>Each VoIP location can have its own Auto Attendant and using the transfer function, Auto Attendants can be nested together creating a seamless nationwide Auto Attendant. (e.g., enterprises main Auto Attendant is configured to seamlessly route to the Auto Attendant of a particular department or location).</p> <p>The administrator can fully configure the Auto Attendant through any web browser in a few clicks of the mouse.</p> <p>Auto Attendant supports one-key dialing and operator dialing as well as name and extension dialing for subscribers at a location. Each is fully configurable by the location or administrator.</p> <p>Auto Attendant is always up to date with the subscribers for the associated location.</p> <p>Auto Attendant features an embedded night service profile that is automatically activated outside of business hours.</p> <p><b>Auto Attendant – Enhanced Business Hours</b></p> <p>The Auto Attendant can be set with multiple time ranges for example (9 a.m. - 11 a.m. and 1 p.m. - 2 p.m.) and support different hours on different days.</p> <p>This flexibility gives customers the added flexibility to treat calls via their Auto Attendant differently for different times of the day as well as days of the week.</p>

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			<p><b>Auto Attendant – Holiday Schedule</b></p> <p>An administrator can create an unlimited number of holiday schedules for their Auto Attendant. Up to a maximum of 20 dates or date ranges can be entered per schedule. This flexibility prevents administrators from having to manually enter dates for every holiday.</p> <p><b>Call Blast – Hunt Group</b></p> <p>Enables all of the phones in a hunt group to ring simultaneously when calls are received on a virtual number. The first phone to be answered is connected. This function is a routing capability of the Hunt Group feature.</p> <p>Hunt Groups can receive incoming calls at all possible locations and without having to set up routing to different devices.</p> <p><b>Call Intercept</b></p> <p>Enables administrators to intercept calls routed to a non-working internal line with informative announcements and alternate routing options.</p> <p>Administrators can use a default intercept message that says, "The number you are trying to reach is out of service." If they prefer, administrators can opt to add language that says callers can press "0" to speak with an operator or they can provide callers with the new telephone number.</p> <p>If they prefer, the message can be customized by the administrator. The service may be assigned to an individual subscriber's phone number (e.g., when they have left the company) or it can be assigned to all subscribers at a location.</p> <p>Administrators can ensure that calls coming into non-working lines are not lost.</p> <p><b>Calling Location ID Delivery</b></p> <p>Provides the name and number of the location (or company) for outgoing calls from subscribers in the location, rather than providing the subscribers own name and number. The location number may be defined on a per subscriber basis.</p> <p>Gives call recipient location-level information.</p> <p><b>Calling Line ID Configuration</b></p> <p>Enables the administrator to configure each of the displayed subscriber calling numbers. This information is visible to subscribers in their profiles as read-only.</p> <p>Administrators can manage the appearance of all calling line IDs.</p>

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			<p><b>Calling Plan – Incoming</b></p> <p>The Incoming Calling Plan is configured via the Verizon Enterprise Center Location Dashboard web interface. In addition to being able to configure which types of calls each subscriber is restricted from receiving (e.g., intra-location), administrators may regulate incoming calling by restricting specific digit patterns. This is done with the Digit String feature in the administrator web portal.</p> <p>The Incoming Calling Plan also enables administrators to reject the following types of incoming calls:</p> <p><b>Collect calls</b></p> <p><b>Calls from within the location</b></p> <p><b>Calls from outside the location</b></p> <p>Enables administrators to block specified incoming calls to their company and/or individual subscribers. For example, some subscribers may be prevented from receiving calls from outside the company. For example, subscribers may be prevented from receiving calls from a competitor's number or a particular area code or country code.</p> <p><b>Calling Plan – Outgoing</b></p> <p>The Outgoing Calling Plan is configured via the Verizon Enterprise Center Administrator Dashboard web interface. In addition to being able to configure which types of calls each subscriber is restricted from making, administrators may regulate outgoing calling by restricting specific digit patterns. This is done with the Digit String feature in Administrator web portal.</p> <p>If a profile has not been configured for a particular subscriber, the default set of outgoing call privileges for the location is applied. Use of the Custom Check Box allows that subscriber to have separate call settings which can override the location level restrictions.</p> <p>Enables administrators to block subscribers from making certain types of outgoing calls, such as long distance, toll, or premium numbers. For example, subscribers may be prevented from calling a competitors number or a particular area code or country code.</p>

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			<p><b>Calling Plan – Outgoing – Enhanced</b></p> <p>In addition to blocking or allowing given call types and digit strings, administrators have the following options for configuring the outgoing calling profile of their location and individual subscribers:</p> <p>Authorization Codes Selected subscribers can be prompted for an authorization code to allow specified call types or digit strings. Administrators can pre-configure one or multiple authorization codes to be entered by subscribers. Use of this feature within the Enhanced Outgoing Calling Plan takes precedence over the standalone Authorization Code service.</p> <p>Call Transfer Specified outgoing call types and digit strings can be automatically transferred to one of up to three transfer destinations that Administrators can pre-configure. For example, international calls made from a conference room may be transferred to a company operator who will validate the Subscribers identity and their purpose for making an international call.</p> <p>Existing configurations are retained when the Enhanced Outgoing Calling plan is assigned to replace the basic version of the service.</p> <p>Provides Subscribers with the option to enter a Sustained Authorization Code to unlock calling from their phone. When the feature is enabled, subscribers will not be prompted for an authorization code every time they make a call that requires an authorization code, as defined by the Enhanced Operations Channel (EOCP). Separate feature access codes are used to turn this feature on and off. Note: Custom Subscriber must be selected in the Dashboard.</p> <p>The Enhanced Calling Plan provides administrators with even greater degree of control over outgoing calls made from within their location.</p> <p>Administrators can choose from different types of call restrictions including:</p> <ul style="list-style-type: none"> <li>▪ Location Calls from within the subscriber's location.</li> <li>▪ Local Calls within the same geographic region.</li> <li>▪ Toll Free Free calls to numbers beginning with 1, usually followed by 800, 877, or 888.</li> <li>▪ Toll Chargeable calls within the same geographic region.</li> <li>▪ International Chargeable calls to other countries.</li> <li>▪ Operator Assisted Calls made with the chargeable assistance of an operator.</li> <li>▪ Chargeable Directory Assistance Chargeable calls made to Directory Assistance such as 411 or 555-1212.</li> <li>▪ Special Services I Calls to 700 numbers. These calls may or may not be chargeable.</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Special Services II (Reserved for system administrators discretion.)</li> <li>▪ URL Dialing Calls made to URLs, which are outside of the location (for example, to an e-mail address outside of the location).</li> </ul> <p><b>Calling Plan – Forwarded/Transferred</b></p> <p>Enables administrators to prevent specified subscribers from forwarding or transferring calls to certain types of numbers, such as long distance, toll, or premium numbers. Calling plans are configured via the Verizon Enterprise Center Administrator Dashboard web interface. If a profile has not been configured for a particular subscriber, the default set of incoming call privileges for the location is applied.</p> <p>Enables administrators to prevent fraudulent calling, such as company employees calling their office number at night or on the weekend to make personal calls to international destinations.</p> <p><b>Configurable Extension Dialing</b></p> <p>The extensions can be of any length (2 to 6 digits) as defined by the administrator and dialed via the Administrator Web Interface or by phone. All extensions within a location must be of the same length.</p> <p>Provides the ability to map directory numbers (DNs) within a location to unique extensions.</p> <p><b>Configurable Feature Codes</b></p> <p>Provides each location administrator with the option to specify the feature codes (a.k.a., star codes) associated with their services (e.g., Last Number Redial, Call Return) via the Verizon Enterprise Center Administrator Dashboard web portal. Subscribers can see, but not edit, the star code associated with each service at any time by referencing their Verizon Enterprise Center Personal Dashboard web portal.</p> <p>Enables Administrators to configure two different feature access codes for the same service. For example, *69 and #81 could both be used to enable Call Return.</p> <p>Enables Administrators to control feature code commands.</p> <p><b>Configurable Feature Code Prefix</b></p> <p>Enables the administrator to define up to two different prefixes to precede their feature codes. Each prefix may include 1-2 characters, with the default being a single star (*).</p> <p>Enables administrators to control feature code commands.</p>

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			<p><b>Configurable Time Zones</b></p> <p>A default time zone is specified for each location. The respective time zone is used for all services requiring date/time stamps, such as Auto Attendant and Selective Call Forwarding.</p> <p>Subscribers have the option of individually change their own effective time zone in cases where it differs from their locations default.</p> <p><b>Device Inventory</b></p> <p>Enables administrators to inventory their equipment including premise gateways and IP phones via their Verizon Enterprise Center Administrator Dashboard web interface. Devices may be easily added, deleted and modified. In addition, administrators can assign subscribers directly to a device and/or a port on a device.</p> <p>Enables administrators to more effectively manage stock.</p> <p><b>E911 Support Enhancement</b></p> <p>Enables routing of emergency calls to the correct tandem switch based on the caller's phone number. The system ignores subscriber disconnects and disallows features to be used when an emergency number (i.e., 911) is dialed.</p> <p>Provides 911 support in case of emergency.</p> <p><b>Hunt Groups</b></p> <p>Hunt Groups allow users to be included in a specified hunt group to handle incoming calls received by an assigned Hunt Group phone number. This is a virtual number not a specific subscriber telephone number.</p> <p>Administrators can choose from any of the following hunt schemes, each of which rings the specified phones in a different manner:</p> <p>Circular sends calls in a fixed order. The call is sent to the first available person on the list, beginning where the last call left off. The Circular option tries the agent after the last agent to take a call. The search continues including looping around the list until it reaches the agent it started with.</p> <p>Regular sends calls to users in the order listed by an administrator. Incoming calls go to the first available person on the list, always starting with the first person on the list.</p> <p>Call Blast all of the users in the group simultaneously; the first user to pick up the ringing phone is connected.</p>

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			<p>With Uniform, as a call is completed, the user moves to the bottom of the call queue in a shuffling fashion. The next incoming call goes to the user who has been idle for the longest. If a user receives a call that was not directed to them through the hunt group, the call will not be included in the receiving order for Uniform calls.</p> <p>No Answer Timeout enables calls that have been distributed to a phone, but not answered in a specific number of rings, to be redirected to the next available phone. If all idle phones have been visited once without answer, there are two options for handling the call: forward call to an external number, or give the call a Temporarily Unavailable treatment, which can trigger a service such as voicemail.</p> <p>Note: There is no limit to the number of users that can be included in a hunt group. Similar to PBX/Centrex features.</p> <p><b>Music on Hold</b></p> <ul style="list-style-type: none"> <li>▪ Enables administrators to upload an audio file onto the system to be played to parties on hold.</li> <li>▪ Provides opportunity to play music and messages to enhance customer calling experience.</li> </ul> <p><b>PS/ALI</b></p> <p>Private Switch/Automatic Location Identification (PS/ALI) is an advanced form of E-911 service. It gives customers the ability to deliver station-level Automatic Number Identification (ANI) and exact location information to the Public Safety Answering Point (PSAP).</p> <p><b>Series Completion</b></p> <p>The Series Completion service can be assigned to a selected series of lines to forward calls on a busy condition. It is a form of hunting in which the next line in the series completion group is tried in a prearranged order, without any limit on the number of sequential forwards. Unlike hunt group functionality, the lead number for a series completion is associated with a specific subscriber. The call is only forwarded if the subscriber's line is busy. If the user's line is not busy then the network will route the call according to the rules that have been configured for a "no answer" condition.</p> <p>This service is used to support Key System functionality. Key systems typically ring all available lines in a specified order for incoming calls, regardless of the number dialed to reach the company. For example, when calling a tech support hotline, the subscriber dials (800) 555-HELP. That number attempts to ring line 1 of company. If line 1 is busy,</p>

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			<p>it will attempt to ring line 2. If line 2 is busy and so on. If all lines are busy, the call can be sent to or another assigned service of the series completion group. Similarly, if all lines or subscribers of this company were assigned to a Series Completion group, Verizon VoIP acts just like a key system. Supports key system functionality</p> <p><b>Management</b></p> <p>Call reporting details via web screen                      Billing reports can be generated daily, weekly, monthly for call detail and printable via website.                      Ease of administrative management.</p> <p><b>Feature Reporting</b></p> <p>Feature reports can be generated for Accounting and Authorization Code usage. Provides usage information by code and by user.</p> <p><b>Customer-managed Routers</b></p> <p>Verizon will design and implement service. Customer retains control of CPE management.                      Allows customer to select the amount of outsourced management they need.</p> <p><b>Administrative site management via web screen</b></p> <p>Via the Verizon Enterprise Center, VoIP provides administrator accounts on a central website for setting up default feature classes for a range of users.                      Ease of administrative management and timely access to information.</p> <p><b>Multi-language Support</b></p> <p>Screens can be displayed in multiple languages.                      Languages include: German, Dutch, French, English (United Kingdom), and English (U.S.)</p> <p><b>User self-provisioning and management via web screen</b></p> <p>Via the Verizon Enterprise Center, VoIP provides web access for users to set up their phones and administer features and calling treatments.                      Allows users the ability to manage their voice application needs including call forwarding and find-me, follow-me lists.</p>

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			<p><b>Security</b></p> <p><b>Authentication</b></p> <p>Validates that user names and passwords to ensure only trusted users are on the network. For SIP phones and analog interfaces, authentication is performed by SIP digest user authentication. For a digital PBX with a router/gateway, authentication is performed via IP Security Authentication Header Protocol (IP Sec AH).</p> <p>High level of security not offered with PBXs. Today's security is key in today's network environment.</p> <p><b>Signaling Support</b></p> <p><b>SIP</b></p> <p>Session Initiation Protocol, an open standard and the leading VoIP protocol. SIP's foundation in HyperText Transfer Protocol (HTTP), allows it to integrate easily with web, e-mail, and other IP applications, providing a highly flexible protocol for delivering the next generation of communication services. Also more scalable than H.323, its competing protocol in the VoIP industry.</p> <p><b>SIP Phone Features</b></p> <ul style="list-style-type: none"> <li>▪ Do Not Disturb</li> <li>▪ SIP phones support Do Not Disturb.</li> <li>▪ Same feature functionality as PBX/Centrex phones.</li> </ul> <p><b>Hold</b></p> <ul style="list-style-type: none"> <li>▪ SIP phones allow users to place calls on hold.</li> <li>▪ Same feature functionality as PBX/Centrex phones.</li> </ul> <p><b>Consultation Hold</b></p> <ul style="list-style-type: none"> <li>▪ The user may place a call on hold and originate another call with privacy.</li> <li>▪ Same feature functionality as PBX/Centrex phones.</li> </ul> <p><b>Three-Way Conferencing</b></p> <ul style="list-style-type: none"> <li>▪ Ability to conference in a third party.</li> <li>▪ Same feature functionality as PBX/Centrex phones.</li> </ul>

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			<p><b>Multi-line SIP Phones</b></p> <ul style="list-style-type: none"> <li>▪ SIP phones offer a minimum of two lines, with Cisco phones supporting up to six lines.</li> <li>▪ Same feature functionality as PBX/Centrex phones.</li> </ul> <p><b>DTMF Digit Support</b></p> <ul style="list-style-type: none"> <li>▪ Dual Tone Multi-Frequency refers to push button or touch-tone dialing.</li> <li>▪ Same feature functionality as PBX/Centrex phones.</li> </ul> <p><b>Phone Portability</b></p> <p>IP phones may be plugged into any Verizon VoIP location.</p> <p>In the PBX environment, moves/adds/changes (MACs) require expensive technicians and wiring charges. IP phones vastly simplifying MACs.</p> <p><b>XML Application Support</b></p> <p>Can write specialized Extensible Markup Language (XML) applications to run on the Cisco phone.</p> <p>Offers flexible feature functionality not offered with traditional PBX phones.</p> <p><b>Call Log</b></p> <p>Displays a log of placed, received, and missed calls.</p> <p>Allows user to easily capture important information.</p> <p><b>Last Number Dialed</b></p> <p>Speed dials the last number dialed.</p> <p>Same feature functionality as PBX/Centrex phones.</p>
1.325	The Offeror shall deliver a network that supports the Commonwealth's currently-deployed compressed video systems.	Y	
1.326	The Offeror shall provide and describe a service between	Y	

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	Commonwealth locations to support secure video conferencing requirements. The proposed services must be able to support SVC's, Quality of Service (QoS) capabilities, multicast, multipoint and fully meshed multicast/multipoint for video networking.		
1.327	The Offeror shall propose a network solution which can support increasing bandwidth requirements for video networking. These minimum requirements range from 384 Kbps (ISDN2B+D) to 45 Mbps (DS3).	Y	
1.328	The Offeror's proposed network services must support all video network standards which include, but are not limited to H.320, H.321, H.323, H324, and H.310.	Y	
1.329	<i>The Offeror shall describe the video network and technical support for multi-port bridging which is provided as part of the proposed network. The Offeror shall describe how the bridge will support multi-point ISDN video connections between</i>	Y	<p>Verizon's Video Conferencing would provide the Commonwealth with a variety of access types, transport methods and supported bandwidth speeds. The service supports both traditional H.320 (ISDN) and H.323 (IP) transport protocols either through public Internet access or via Verizon's Private IP service.</p> <p>By using PIP, the Commonwealth can utilize Verizon's world-class Video Conferencing service and leverage the CoS capabilities of PIP to prioritize video flows.</p> <p>There are 3 service types:</p> <p><b>Premier</b> – Verizon's highest service level provides a dedicated Meeting Manager to</p>

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	<i>Commonwealth and other end user locations.</i>		assist the conferencing leader with planning and hosting a high visibility event. The Meeting Manager remains on the call to provide assistance if needed. <b>Standard</b> - a Conference Coordinator assists the conferencing leader at the beginning of the call by announcing participants as they join the call and assisting with end-user video connection. Once the call begins, the coordinator will leave, but remains accessible for the conferencing leader if needed. <b>Instant</b> - this self-service provides conferencing leaders with a reservation-less option to host calls on-demand and manage the features of the call.
1.330	The Offeror's proposed network solution must accommodate the Commonwealth as its bandwidth requirement for video networking increases and must include new technologies, particularly Video over IP (hereinafter referred to as VIP).	Y	
1.331	Voice Reporting and Training Services		
1.332	The Offeror shall provide detailed real-time, online reports that contain at the minimum the following fields: summary, the call number, the terminating number, abandoned calls, time to answer, call detail, call attempt, call duration, incomplete calls, retries, area code, frequent calling number, trending and call routing.	Y	

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1.333	The Offeror shall provide and describe how historical monthly reports will be delivered.	Y	The Verizon Program Management Office (PMO) will provide the Commonwealth mutually agreed to Historical and Performance reports, which will be available to the Commonwealth on the Verizon Intranet Web site managed and maintained by the Verizon PMO.
1.334	At the end of each calendar month, the Offeror will provide a summary report to the Commonwealth. The monthly report will include MAC, cabling and maintenance charges, but not limited to: agency name, number of service orders completed and total dollar amount of service orders billed.	Y	
1.335	The Offeror shall design and provide a monthly maintenance management report on dispatch center logging, tracking, and updating Commonwealth service calls.	Y	
1.336	The Offeror shall provide real-time or near real-time "Trap and Trace" service with results provided immediately (the ability to report and obtain caller information, name, number, and address for nuisance, threatening, or dropped, possible emergency, calls; identify/trace threatening, harassing, and nuisance telephone calls).	Y	

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1.337	The Offeror shall provide a training plan for system administration during the life of both the initial warranty period and any subsequent maintenance contracts. Training shall include the process for completing moves adds and changes (MAC) for the general phone systems, voice mail, ACD, call accounting packages and other peripherals purchased from the contract.	Y	
1.338	Department of Corrections		
1.339	<i>The Offeror shall describe its ability to provide a PBX with capabilities of Watch Call/Head Count Conference for automatically conferencing a minimum of twenty-one (21) participants by dialing a pre-defined access code.</i>	Y	<p>Verizon, with its subcontractor Black Box, will provide the following:                      Watch Call / Head Count Conference – Black Box is currently providing a 24-Port Forum Communications Confer ALERT Plus v.2 system with advanced features specifically designed to support the Commonwealth’s Department of Corrections.                      The Confer ALERT Plus far exceeds the specifications provided by the Commonwealth. In addition to allowing a minimum of 21 participants, by dialing a pre-defined access code, the system provides advanced features found extremely beneficial in the state correctional institutes.</p> <ul style="list-style-type: none"> <li>▪ Modular design – Capable of sizing the All Call System from 24 ports up to 64 ports in 8 port increments.</li> <li>▪ Multiple All Call Lists – The feature allows the correctional institutes to assign different stations to three different lists, thus allowing Control the ability to choose which list the specific all-call is for. Utilizing the largest All Call System with all three lists allows Control to contact a maximum of 192 stations in minimal time.</li> <li>▪ All Call Barge-In – This feature will barge-in on a busy station to allow that busy station to decide to join the All Call Conference by pressing a key on the handset, or decide to continue the existing conversation. If the station decides to join the All Call Conference, hears the announcement and Control ends the conference, the station will return back to the previous conversation.</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Head Count Conference with Printer – Real time data for the various conferences and off-hook alarms will be available from the Callwhere Call Accounting (SMDR) system.</li> </ul>
1.340	<i>The Offeror shall describe its ability to provide a PBX with capabilities of Rip-Out/Off-Hook Alarms for analog and digital phones. The system shall within a maximum of 10 seconds generate audio and visual alarms to a control center whenever a phone is off-hook or cable is severed or ripped out of the jack.</i>	Y	Verizon, with its subcontractor Black Box, will provide the following: Rip Out and Off Hook Alarms – Black Box is currently providing the RAMEX solution for the analog telephone rip out alarms and the PBX for supporting off hook alarms.
1.341	<i>The Offeror shall describe its ability to provide a PBX with the capabilities of Head Count Conference with Printer that provides real time data for the Watch Call/Head Count Conference and Rip-Out/Off-Hook Alarms. The data will include at least the following information: extension number, location, date and time of event, and text that identifies whether is a conference or alarm.</i>	Y	Verizon, with its subcontractor Black Box, will provide the following: Head Count Conference with Printer – Real time data for the various conferences and off-hook alarms will be available from the Callwhere Call Accounting (SMDR) system.
1.342	Technology Refresh for Voice Services		
1.343	The Offeror shall provide advice for coin/card phone services as	Y	

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	new technologies emerge.		
1.344	The Offeror shall provide ongoing evaluation of new technologies and advise the Commonwealth on their potential to enhance, improve, and reduce costs of service.	Y	
1.345	After discussions with the agency, the Offeror shall create a detailed cutover schedule for each agency.	Y	
1.346	Payphone Services		
1.347	The Offeror shall appoint a project manager to oversee the total payphone installation.	Y	
1.348	The Offeror shall not sell or use lists of pay telephone numbers, names, or addresses, except as outlined in the RFP.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.349	The Offeror shall protect adjacent property and shall provide and maintain all passageways, fences, lights, guards, and other facilities as required by public authority or local conditions.	Y	
1.350	In the event of restructuring of Commonwealth building assets between Commonwealth entities, the Offeror will continue to support the payphones within the building and adjust its billing records to charge the new entity unless other wise directed.	Y	
1.351	The Offeror shall ensure that all services and equipment proposed during the term of the contract complies with all Federal and State laws, rules and regulations including but not limited to rate making, branding, provision of consumer information, access to local, IntraLata, and InterLata carriers, accommodations for individuals with disabilities and any applicable construction, electrical and safety codes.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.352	The Offeror shall comply with all applicable regulations and mandates of the Commonwealth Public Utilities Commission (PUC) and the Federal Communications Commission (FCC) and must meet all applicable requirements of the Telecommunications Act of 1996 and any amendments or replacements of the act. All installations must be in compliance with the Americans With Disabilities Act to include the installation of text telephones (TTY).	Y	
1.353	The Offeror shall be solely responsible for the compatibility of the proposed service and equipment with any and all circuits and facilities as provided by the LEC and all other common carriers to meet the requirements of these specifications.	Y	
1.354	The Offeror's transition plan will include the transition of payphones.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.355	The selected Offeror shall install new enclosures or refurbished as new to conform to, or are an approved equal to, those listed in the payphones inventory, Exhibit F-4.	Y	Verizon will purchase the incumbent's payphone equipment that is already in place.
1.356	The Offeror shall include a complete description of any special environmental considerations, which are required to ensure proper operation of payphone services.	Y	
1.357	The Offeror shall provide and install adequate surge and lightning protection equipment on all lines used.	Y	
1.358	The following payment options and services shall be available to the public when placing calls from coin/card stations: <ul style="list-style-type: none"> <li>● cash station-to-station (only local calls and intraLata)</li> <li>● collect station-to-station</li> <li>● billed to third number station-to-station (all LEC calling cards, but cannot process proprietary cards)</li> <li>● calling card station-to-station</li> <li>● time and charge quotations</li> </ul>	Y	

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	<ul style="list-style-type: none"> <li>● cash person-to-person (local and intraLata only, no cash calls of any type on interLata or interstate)</li> <li>● collect person-to-person</li> <li>● billed to third number person-to-person</li> <li>● calling card person-to-person</li> <li>● calls to toll free 800/888/877/etc numbers</li> </ul>		
1.359	<i>The Offeror shall describe the billing process for all billed calls and the collection process for the bills for all calls including uncollectible calls.</i>	Y	Verizon has included the payphone support services as part of our offering to the Commonwealth for the current quantity of payphones. There will be no billing to the Commonwealth for these services. Calls placed at the Commonwealth payphones will be paid by the calling party when placing the call.
1.360	The Commonwealth shall bear no responsibility for theft of funds, and furthermore, no stolen or lost funds shall be deducted from revenue on which commissions are paid to the Commonwealth.	Y	
1.361	The Commonwealth shall bear no responsibility for fraudulent calls.	Y	
1.362	The Commonwealth shall bear no responsibility for unbillable or uncollectible calls	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.363	In its Cost Submittal, the Offeror shall provide a rate sheet detailing the charges that the public will be charged when using the coin/card payphones under contract to the Commonwealth.	Y	
1.364	Under the contract resulting from this RFP, no coin/card stations shall be disconnected or removed without the concurrence of the Commonwealth and there shall be no charge for any coin/card station removed after the effective date of the contract.	Y	Verizon will work with the Commonwealth to identify where these mailboxes exist in their current Auto Attendant and end user mailbox applications. These requirements will be met by Verizon's National Unified Messaging (NUMS) Voice Mail Service either as Auto Attendant Menu Mailboxes or for end user voice mail using Extension Mailboxes. This allows multiple mailboxes in a single mail box. The description for extension mailboxes is: <ul style="list-style-type: none"> <li>▪ Available with Standard, Enhanced, and Information Only mailboxes</li> <li>▪ Max of nine extension mailboxes are available on a single line</li> </ul>
1.365	The Offeror shall offer a variety of enclosure and pedestal types to provide the Commonwealth maximum options. In select locations (e.g. highways and other high traffic areas), enclosures shall provide noise suppression. The following enclosure types shall be offered as a minimum: drive-up, wall, pedestal, booth, flush mount. The Offeror is encouraged to offer a variety of these types, plus additional types.	Y	Verizon will purchase the incumbent's payphone equipment that is already in place.



Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.366	The Offeror shall provide information on the long distance carrier it has chosen to provide the public coin/card phones.	Y	
1.367	<i>The Offeror shall describe how it will report and disburse commissions from the coin/card phone service.</i>	Y	The Program Management Office (PMO) will perform a monthly reconciliation and provide the Commonwealth with a report outlining the month's commission statement and will facilitate the appropriate commission payments to the Commonwealth. The PMO will perform an ongoing analysis and reconciliation to ensure timely and accurate commission payments to the Commonwealth.
1.368	The design and placement of signs indicating the location of coin/card stations shall adhere to Commonwealth agency needs as well as conform to a reasonable interpretation of good common sense and propriety. Recognizing that two principal purposes for the public payphones are the convenience of the public and maximization of commission revenue to the Commonwealth, Offeror agrees to place more location signs than might generally be considered normal in unusual areas such as state parks or multiple locations within a building. The Offeror shall reach agreement with the using agency in these situations. The Commonwealth shall make the decision if the Offeror and	Y	

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	the using agency cannot agree on a signage issue.		
1.369	The Offeror shall provide additional chargeable components for public coin/card payphones where the Offeror not install a commission based coin/card payphone due to the existing or potential low revenues. If an agency still requires coin/card public payphone services and is willing to pay for the services the Offeror may charge the agency monthly for providing services to include the payphone, dial tone, repair services, maintenance services and all other management/maintenance aspects defined in this RFP.	Y	
1.370	The Offeror shall work with the Commonwealth after contract award to make any required adjustments to the Offeror's installation, transition and implementation schedule. The Offeror must adhere to time and deadline requirements.	Y	Verizon will purchase the incumbent's payphone equipment that is already in place.

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.371	<p>The Offeror shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none"> <li>● Coin/card stations shall be used, or continue to be used, in locations where they are presently in place.</li> <li>● Coin stations shall be supplied with current telephone directories; both white and yellow pages which will be mailed or hand delivered if not reachable by mail to each location for the Commonwealth's distribution for that area payphone(s).</li> </ul>	Y	
1.372	<p>The Offeror shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none"> <li>● There shall be no charge for busy, no answer, or incomplete calls regardless of how long the user waits before hanging up.</li> <li>● Stations shall be continually scanned for malfunction by the Offeror's maintenance operation.</li> </ul>	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.373	<p>The Offeror shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none"> <li>● The stations shall display the name of the Contractor(s) providing local, IntraLata and InterLata service.</li> <li>● The stations shall display the telephone number of the station Contractor's repair service. This number is required to be accessible 24 hours a day, 7 days a week, 365 days a year.</li> <li>● The stations shall have adequate usage instructions and the charge for a local call displayed on the coin/card telephone housing.</li> </ul>	Y	
1.374	<p>The Offeror shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none"> <li>● Coin/card stations shall not require an external power source to remain operational. The telephone line should be the only source of power required for the station to function.</li> <li>● Coin stations shall accept</li> </ul>	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	nickels, dimes, and quarters as payment options. <ul style="list-style-type: none"> <li>● Each Offeror shall specify its approximate set-up time in seconds for directly dialed and operator handled calls.</li> </ul>		
1.375	The Offeror shall ensure the station equipment includes the following physical and design characteristics: <ul style="list-style-type: none"> <li>● Tamper proof locks - upper and lower housings.</li> <li>● Discrete tones upon coin deposits.</li> <li>● Slug rejection chute design.</li> <li>● Chute string cutter to prevent stuffing of chute.</li> <li>● Floating case hardened metal plate to prevent side drilling entry.</li> <li>● Installation reinforced by security studs to prevent theft of telephone.</li> <li>● Meet the requirements of the hearing impaired legislation and the Americans With Disabilities Act (ADA), the Telecommunications Act of 1996, and Act 181 of 2002 and any updates or replacement of the act.</li> </ul>	Y	

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1.376	<p>The Offeror shall ensure the station equipment includes the following physical and design characteristics:</p> <ul style="list-style-type: none"> <li>● Dial tone/touch-dial service.</li> <li>● A steel housing that protects the counting, collecting, storing and electronic components of the telephone.</li> <li>● Operating ease with concise instructions on the faceplate.</li> <li>● Industry standard design.</li> <li>● An armored handset cord that is resistant to stretching and breaking to minimize out-of-service conditions.</li> <li>● Magnetic coin stops to capture non-coin deposits.</li> <li>● Automatic locking coin receptacles.</li> <li>● Security seals on coin receptacles.</li> </ul>	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.377	<p>The Offeror shall meet the following operational standards for all coin/card telephone stations:</p> <ul style="list-style-type: none"> <li>● Automatic user access to predetermined primary IntraLata and InterLata carriers.</li> <li>● Automatic user access is immediate dial tone to the carrier without dialing any codes</li> <li>● Access to IntraLata and InterLata carriers through 800/888/877/950/10XXX, or any other FCC/PUC approved access codes.</li> <li>● Offeror shall make available, and shall identify, the cost if any, for calls to Directory Assistance 411 and/or 555-1212 service.</li> </ul>	Y	
1.378	The Offeror shall ensure all payphones without call back capabilities are labeled stating so.	Y	
1.379	The Offeror shall include in its proposal a listing of features that it will provide the Commonwealth.	Y	Verizon's payphone features meet all industry standards (0+/0-, local, intra, inter-LATA traffic is operator platform only, and access to other carriers (800, 888, 877 10XXX etc).
1.380	The Offeror shall meet the following operational standards for all coin/card telephone	Y	

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	stations: <ul style="list-style-type: none"> <li>● Free calling to emergency service, 911, and 0</li> <li>● Free calls to toll free services 800/888/877/etc. numbers</li> <li>● Free access to live operator assistance for collect local, IntraLata and InterLata calls, and other user needs 24 hours a day, seven days a week, 365 days a year.</li> </ul>		
1.381	The Offeror may propose the same type of station equipment and TTY equipment and/or enclosures that are currently in place, an approved equal, or an upgrade. If an equal or an upgrade is proposed, documentation shall be submitted to support that fact.	Y	Verizon will purchase the incumbent's payphone equipment that is already in place.
1.382	The Offeror shall supply TTY equipments and enclosures with new payphone installations. At the end of the contract the installed TTY equipment will become the property of the Commonwealth.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.383	The Offeror shall supply cabling and conduit required to complete a coin/phone card installation.	Y	
1.384	The Offeror shall certify that all equipment, enclosures and software included shall be in good working order at test and acceptance, and that the Offeror shall repair or replace malfunctioning equipment, enclosures and software and return them to good working order.	Y	
1.385	The Offeror shall be responsible for the complete installation of payphones. It shall be the Offeror's responsibility to provide any required interface equipment.	Y	
1.386	The Offeror shall be responsible for all permits applicable to the installation, operation, and maintenance of the telephone equipment, enclosures, associated wiring, and dial tone services.	Y	
1.387	The Offeror shall ascertain that all coin/card station installations comply with the ADA, e.g.,	Y	

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	height of coin slot, accessibility by wheel chair etc. If in-place stations are retained, locations not in compliance must be brought into compliance. In addition, in multiple station locations, if a TTY (text telephone) is required by law, the Offeror shall install an Ultratec Pay Phone TDD M240, M120, OR APPROVED EQUAL.		
1.388	In the event that portable equipment or supplies are located in any room or space any time the Offeror is on site, it shall be the Offeror's responsibility to protect all such equipment and supplies while performing under this contract. Should such equipment or supplies interfere with the performance of this contract, it shall be the Offeror's responsibility to remove, store, and protect such equipment or supplies until the work is completed and then replace the same where found or as directed by the Commonwealth.	Y	
1.389	The Offeror shall clean up and remove all debris and packaging	Y	

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	<p>material from the site, The Offeror will provide its own trash cans or dumpsters at the site for the debris and remove them at the end of the site installation. Commonwealth trash cans or dumpsters will not be used without permission from the Commonwealth. Upon completion of the installation, the premises shall be left in order and ready for immediate use.</p>		
1.390	<p>The Offeror shall use the same name and location address to identify the locations of payphones as the Commonwealth. If the Commonwealth changes the name and address of a location, the Offeror shall also change the name and location address</p>	Y	
1.391	<p>The Offeror shall not assess any charges to the Commonwealth for the telephone lines, station equipment, cabling, telephone directories, Offeror work, associated wiring or any other cost to install and maintain the coin/card public telephone service.</p>	Y	

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1.392	The Offeror shall clean and sanitized all coin/card stations. Cleaning is to include the removal of all graffiti, stickers, posters, litter, dust and dirt on each station. The Offeror shall provide a cleaning schedule as part of the proposal.	Y	
1.393	The Offeror shall have sufficient repair personnel to be able to simultaneously respond to multiple repair events on coin/card telephone stations located throughout Pennsylvania.	Y	
1.394	The selected Offeror shall provide the necessary labor, parts, materials, and transportation to maintain all proposed coin/card telephones, enclosures in good working order and in compliance with the equipment manufacturer's specifications throughout the life of the contract. This includes responsibility for damages to coin/card public telephones.	Y	

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1.395	The Offeror shall remotely test each coin/card station once a day to determine if it is functioning normally.	Y	
1.396	The Offeror shall provide routine and preventive maintenance at no additional charge to the Commonwealth. This includes provision of facilities, personnel, transportation, lodging, labor, parts, software, modifications, and any other items/services relating to routine and preventive maintenance.	Y	
1.397	Malfunctions which cannot be immediately or unequivocally diagnosed and pinpointed to a certain item of equipment, software, or service shall require the participation of all service suppliers until responsibility for the problem has been unequivocally established.	Y	

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1.398	<i>The Offeror shall describe its plan for periodic coin station inspection, station/booth cleaning, and calling instruction/directory replacement.</i>	Y	Technicians and collectors are required to wipe down or otherwise clean the telephone sets and enclosures while they are on site performing maintenance and collection activities. Payphones and enclosures are cleaned, including removal of dirt, smudges and fingerprints from exterior surfaces of payphone and enclosure and/or its components; application of a bactericidal agent to handset; and the removal of unauthorized labels or signage. Technicians also perform routine functional tests of the telephone sets while they are on site performing remedial repair services. Routine functional tests include handset side-tone, hook switch and keypad operation, volume control functionality, test call pattern verification and physical inspection of the instruction cards. This proposal includes replacement of directories as required.
1.399	<i>The Offeror shall describe the method to be used to detect full coin-in-box conditions.</i>	Y	Counting and Collection Management System (CCMS) controls the collection schedules and enables the counting of coins (sent-paid revenues). The system supports about 270,000 payphones and is used to collect and count coin revenue. CCMS provides the following functions: <ol style="list-style-type: none"> <li>1. Service Order Processing</li> <li>2. Collection - tracks phone number and revenue collected from phone</li> <li>3. Prediction – interval rates for collection</li> <li>4. Scheduling – when collections will take place</li> <li>5. Counting – counting of revenue from phones</li> <li>6. Revenue reporting of all sent-paid revenues.</li> </ol>
1.400	<i>The Offeror shall describe in detail the trouble detection and repair procedures specific to payphones.</i>	Y	Verizon's advanced technology utilizes two unique diagnostic systems described below. With these systems, telephone troubles are automatically detected and repair technicians dispatched, usually before the customer is aware a problem exists. Central office equipment monitors all call processing and transmission quality and scans all lines for troubles (Verizon does not monitor the conversation). Failure reports are automatically sent to a Maintenance Center. Maintenance Administrators analyze this data; test the line; and, if it is determined there is trouble or a possible full money box on the circuit, a field technician or collector, as appropriate, is dispatched to correct the trouble. Utilizing Verizon's testing system, a program scan test can be established to automatically perform a daily test of each of the telephones in the Verizon service area. If an out-of-service condition is identified, a maintenance administrator will dispatch a technician to accomplish the repair.



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			<p>The central office electronic scanning described above identifies an advanced technology that Verizon also uses to pinpoint potential full box situations before the customer realizes an out of service condition exists. All test results are reviewed by maintenance center personnel and a technician or coin collector is dispatched to correct any problems.</p> <p>Where Verizon public stations are based on "smart-set" technology, the stations constantly transmit trouble information to a central processor for review by the maintenance center personnel. Likewise, if maintenance is required, then the appropriate activity is scheduled.</p>
1.401	The Offeror shall ensure the help desk system is used to track payphone trouble tickets.	Y	
1.402	The Offeror shall provide a detailed time line schedule for all in service and/or change of service activity.	Y	
1.403	It is intended that existing public payphone locations be continuously analyzed for profitability and that new locations be surveyed. The Commonwealth expects advice from the Offeror on an ongoing basis.	Y	
1.404	The Offeror will monitor the usage of payphones at each location and determine if addition payphones should be installed at high usage locations. The Offeror will advise the	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	Commonwealth of its findings. The Commonwealth will decide if the additional equipment is installed.		
1.405	The Offeror shall make payments for payphone commissions from coin/card public payphones monthly by the 30th calendar day (or last day of the month if the month has fewer than 30 days) of the following month to each designated Commonwealth using agency.	Y	
1.406	The Offeror shall ensure the Commonwealth receives monthly commissions from all public payphones that are being charged a monthly operating fee.	Y	
1.407	<i>The Offeror shall describe, in detail, its plan to provide complete revenue collection service capabilities detailing the methods of collection for each type of revenue source (coin and non-coin local, IntraLata and InterLata, etc.). The Offeror shall also explain in detail the security measures that will be taken to ensure the safety of, and verify the accuracy of, all revenues</i>	Y	Information is gathered from several sources so as to include all revenues generated from each telephone. Data is retrieved as follows: CASH IN THE BOX - Each coin telephone contains a secured cash box tagged and dedicated to that telephone. Each box has its own key. Verizon utilizes state-of-the-art technology in a BAR coding process for coin collections to ensure posting revenue to the proper station and account. The box is not emptied at the customer location, but is removed in a locked position and replaced with an empty box. The box is then transported to the counting center in a locked carousel; coins are counted and the total amount is posted to the account for that telephone. The data is maintained in a database until the close of the calendar month. At the close of the calendar month, this data is merged with the non-cash records described below to determine the amount of the cash that is cash toll, both intraLATA, and interLATA. The intraLATA cash and interLATA cash is deducted leaving the local cash amount.

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	<i>collected. The contents of this description shall also include information regarding the number and location of collection facilities, a description of the method used to collect and count coins from Offeror terminals, the ratio of coin telephones to route collectors, the frequency of collection and the method used to determine coin-in-box level.</i>		<p>The interLATA cash value is returned to the carrier who transported those calls.</p> <p>NON CASH (THIRD NUMBER, CREDIT CARD, COLLECT) - Billing information originating from a public telephone is recorded on magnetic tape and associated with that telephone number. This data is electronically fed to the Commission system on a daily basis and accumulated for the month at the close of each month.</p> <p>Verizon accumulates all non-cash billing data from all public telephones in the authorized account. This data is captured by telephone number and stored on tape for transmission at the end of each month.</p> <p>Verizon will maintain complete and accurate data for all revenues generated for 2 years. This data will be internally audited periodically to ensure accuracy and completeness.</p> <ul style="list-style-type: none"> <li>▪ Information regarding the number and location of collection facilities</li> <li>▪ Ratio of coin telephones to route collectors</li> <li>▪ Verizon has one coin counting facility in the state of PA. It is located in King of Prussia.</li> <li>▪ Verizon has 2 technicians/collectors to every coin telephone for the state of PA.</li> </ul>
1.408	<i>The Offeror shall describe in detail how refunds and customer complaints will be handled specific to payphones.</i>	Y	<p>Verizon coin refund center provides refunds on all coin calls whether the coin call was completed or not via a toll free number. Verizon also provides credits to its telephone customers on their bill.</p> <p>All payphones have dial instruction cards and information for reporting trouble, complaints, etc. A toll free number is provided, and patrons are instructed to call the number to reports any issues. In turn, these calls are answered by Verizon representatives and are passed on to the appropriate group to handle based on the type of issue reported.</p>
1.409	<i>The Offeror shall describe in detail how it will assure there is proper accounting of originated revenues generated and that accurate commissions are paid will be accomplished.</i>	Y	<p>The Program Management Office (PMO) will perform a monthly reconciliation and provide COPA with a report outlining the month's commission statement and will facilitate the appropriate commission payments to COPA. The PMO will perform an ongoing analysis and reconciliation to ensure timely and accurate commission payments to COPA.</p>
1.410	<i>The Offeror shall describe in detail how the establishment of the collection intervals on a</i>	Y	<p>Verizon's Counting and Collection Management System (CCMS) controls the collection schedules and is used on about 270,000 payphones. This system is used to schedule, collect and count coin revenue.</p>

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	<i>station-by-station basis will be accomplished.</i>		Collection intervals are based on money in the coin box. CCMS technology allows the phone to communicate when its coin box has reached a certain capacity and needs to be collected. When this information is received, CCMS dispatches a coin tech to make the collection.
1.411	It is solely the Offeror's responsibility to collect the revenue on the billed calls generated through the coin/card telephones. Uncollected or uncollectible calls are not to be subtracted from the gross revenue base for the purpose of determining the commission payments to the Commonwealth.	Y	
1.412	<i>The Offeror shall describe in detail how the collecting, recording and maintaining of records on the amount of coins collected by station will be accomplished.</i>	Y	<p>Information is gathered from several sources so as to include all revenues generated from each telephone. Data is retrieved as follows:</p> <p><b>CASH IN THE BOX</b> - Each coin telephone contains a secured cash box tagged and dedicated to that telephone. Each box has its own key. Verizon utilizes state-of-the-art technology in a BAR coding process for coin collections to ensure posting revenue to the proper station and account. The box is not emptied at the customer location, but is removed in a locked position and replaced with an empty box. The box is then transported to the counting center in a locked carousel; coins are counted and the total amount posted to the account for that telephone. The data is maintained in a database until the close of the calendar month. At the close of the calendar month, this data is merged with the non-cash records described below to determine the amount of the cash that is cash toll, both intraLATA, and interLATA. The intraLATA cash and interLATA cash is deducted leaving the local cash amount. The interLATA cash value is returned to the carrier who transported those calls.</p> <p><b>NON CASH (THIRD NUMBER, CREDIT CARD, COLLECT)</b> - Billing information originating from a public telephone is recorded on magnetic tape and associated with that telephone number. This data is electronically fed to the Commission system on a daily basis and accumulated for the month at the close of each month.</p>

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			Verizon accumulates all non-cash billing data from all public telephones in the authorized account. This data is captured by telephone number and stored on tape for transmission at the end of each month.  Verizon will maintain complete and accurate data for all revenues generated for 2 years. This data will be internally audited periodically to ensure accuracy and completeness.
1.413	The Offeror shall explain in detail how all commissions are determined or calculated. Specify all factors that the Offeror shall use.	Y	
1.414	The commissions will not apply to calls resulting from using 800 to access live or automated operator services, i.e. 800-COLLECT, 800-CALL ATT, etc., nor to calls dialed to, and terminating on, toll free 800/888/877/etc numbers. The Commonwealth requires the Offeror to provide commission payments based upon a percentage of the gross billed revenue, less applicable state or federal taxes, generated at each public coin/card station. Gross revenue is defined as revenue for all billed calls without exception.	Y	
1.415	Offerors shall provide the commission data as part of its Cost Submittal.	Y	

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1.416	A percentage of the grossed billed revenue from the telephone services shall be offered in the form of commissions to the Commonwealth.	Y	
1.417	The commission checks for payphones shall be sent to the using agency and shall be accompanied by a report that as a minimum includes: <ul style="list-style-type: none"> <li>● Total Commission</li> <li>● Total Revenue</li> <li>● Total Messages</li> <li>● Total Minutes</li> <li>● Total Stations</li> </ul>	Y	
1.418	The Offeror shall develop a log for coin/card station inspections, and for maintenance work performed on all stations. The log is to be submitted to the Commonwealth monthly.	Y	

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1.419	The Offeror shall maintain an accurate recording and tracking system for substantiating commission payments and describe its recording and tracking system such as where it shall be located, how it is accessed.	Y	
1.420	The Offeror shall maintain complete and accurate call accounting records for the term of the contract, plus extensions to it. This data shall be available for audit at the request of the Commonwealth or designees. All information should be retrievable in a print format and electronic media. These records shall be transferred to the Commonwealth at the termination of the contract. The electronic media required to read the data may not be proprietary.	Y	



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1.421	The Offeror shall provide a report that contains monthly gross revenue generated by each telephone by revenue category, i.e., local, IntraLata, and InterLata, with accompanying commissions calculated by telephone and summarized by location.	Y	
1.422	The Offeror shall provide a report that contains monthly gross revenue generated by each telephone by sent-paid and non-sent-paid categories, summarized by location	Y	
1.423	The Offeror shall provide a report that contains monthly gross revenue generated by each telephone by sent-paid and non-sent-paid categories.	Y	
1.424	The Offeror shall provide a report that contains monthly gross revenue generated by each telephone by sent-paid and non-sent-paid categories, summarized by using agency.	Y	
1.425	The Offeror shall provide a complete set of detailed financial reports to the Commonwealth	Y	

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	monthly commencing on a mutually agreeable date about four (4) months after the effective date of the contract.		
1.426	The Offeror shall provide a report that contains monthly gross revenue generated by each telephone by revenue category, i.e., local, IntraLata, and InterLata, with accompanying commissions calculated by telephone and summarized by agency.	Y	
1.427	Offeror shall furnish a cumulative monthly management report, which will be emailed to the OA Contract Management Office. The Offeror shall provide report design in response for System A. The report shall be associated with its dispatch center(s) logging, tracking, and updating Commonwealth service calls as proposed in the RFP. The Offeror shall also manage the Commonwealth maintenance liquidated damages in the same cumulative monthly report.	Y	

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1.428	The Offeror shall submit the projected annual gross billed revenue, the commission percentage, the projected annual dollar commission payment, and the minimum annual dollar guarantee for each service to the Commonwealth.	Y	
1.429	The Offeror shall agree to develop additional reports as may be reasonably required by the Commonwealth and to provide the Commonwealth with such reports at a frequency to be mutually agreeable to both parties.	Y	
1.430	The Offeror shall provide a monthly report summarizing the statistics for stations in each using agency and shall be supply the report to the Commonwealth within 30 calendar days after the end of the month.	Y	
1.431	The Offeror will provide a monthly report of how many times a TTY device is used per each payphone.	Y	

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1.432	The Offeror shall provide a report that contains monthly gross revenue generated by each telephone by revenue category, i.e., local, IntraLata, and InterLata, with accompanying commissions calculated by telephone.	Y	
1.433	The selected Offeror shall be required to provide sufficient training to adequately orient selected Commonwealth employees on the proper use of payphone systems.	Y	
1.434	All training shall be accomplished at a location in Harrisburg to be identified at a later date. The Offeror must be able to provide to all Commonwealth Telecommunications Management Officers (TMO) information regarding the types of equipment and service available for coin/card public phone services. Training shall also encompass methods by which these TMO's can assess their environments and develop a plan for placement of coin/card	Y	

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	telephones that maximizes usage, services, commissions, and addresses special agency needs.		
1.435	<i>The Offeror shall include a description of and the number of follow up training sessions, it will provide.</i>	Y	Verizon will prepare custom documentation and training session(s) based on the Commonwealth's needs.
1.436	Written material/pamphlet, or video utilized in the training programs, all ongoing and new training programs, Offeror shall allow the Commonwealth to make use of any material provided.	Y	
1.437	The Offeror shall demonstrate a series of local and long distance telephone calls placed from public payphones in which multiple stations are installed. The calls shall be received using a variety of terminating switches/station equipment.	Y	
1.438	The Offeror shall submit a general cutover schedule with its proposal, including time frames for the various stages of installation and tests and acceptance by the Commonwealth for coin/card public telephone services.	Y	

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1.439	The Offeror shall ensure that each location being transitioned will have a minimum of at least one working payphone.	Y	
1.440	During transition, the Offeror shall reinstall any existing Commonwealth or otherwise owned TTY devices currently in the old equipment and reinstall them into the new equipment.	Y	
1.441	The Offeror shall be responsible for all costs and/or penalties associated with the replacement of the existing stations, enclosures, and TTYs installations.	Y	
1.442	Offeror shall submit a complete and detailed schedule of the time required for installation steps, utility coordination, training, cutover, testing and acceptance for coin/card phone systems. The schedule shall include staff charts, date, and any cutover aspects.	Y	
1.443	The Offeror shall replace on a one-for-one basis all existing coin operated stations and/or card operated stations.	Y	

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1.444	The coin/card public payphone conversion is requiring completion within six (6) months from the date of the contract award. If Offeror requires additional time include the reasons why and its time for completing the project.	Y	
1.445	SECURITY SERVICES		
1.446	Security Architecture		
1.447	<i>The Offeror shall describe in detail how the security architecture will be implemented and deployed to address compliance with Commonwealth standards and interoperability requirements.</i>	Y	<p>Verizon is proposing a security architecture that will provide multiple layers of security as well as the flexibility and scalability to meet not only the Commonwealth's standards, but also to meet the business requirements as expressed in the various Information Technology Bulletins (ITBs) and the current environment description in Exhibit B.</p> <p>The core of the Security Architecture will essentially be part of the Enterprise Internet Access Architecture. Please refer to the Technical Solution diagram, with all core components in High Availability (HA – Active/Passive) configuration at two geographically disparate locations with different Internet Service Providers.</p> <p>The Enterprise Security Architecture will be comprised of the following key components:</p> <p><b>Firewalls</b> – Will be used to secure the Commonwealth's environment from the Internet and also provide the flexibility to create multiple DMZ's for functions such as Remote Access, Business Partners, and others, such as server farms or applications requiring Internet Accessibility and special security policy.</p> <p><b>Intrusion Prevention System</b> – IPSs will be another essential part of the Enterprise Security architecture, providing stateful protection from the network and higher layer vulnerabilities such as worms, trojans, spyware, key loggers and other malware from either entering or exiting and propagating through the Commonwealth network.</p> <p><b>Content filtering and Proxy</b> – This solution will provide the ability to define and implement an acceptable Internet use policy for Internet access with the ability to limit</p>

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			<p>Web access by white-listing and black-listing URLs and also limiting streaming and Internet Messaging type traffic. Additionally, this will provide capabilities to authenticate the various Commonwealth users and apply policy accordingly.</p>
1.448	<p><i>The Offeror shall describe how its defense in-depth security approach will be used in the design, implementation, and support of the network and security architecture.</i></p>	Y	<p>The defense in-depth approach to Security is manifested by a combination of the layered Security Architecture and by the unique approach to managed security provided by Verizon.</p> <p>This key part of the strategy provides the ability to correlate across the various layers and identify, alert, prevent and report on any potential threats, vulnerabilities and incidents, with the ultimate goal of reducing the risk to the Commonwealth environment. The layered and flexible solution will include security devices—firewall, IPS and Content filtering/Proxy, Cloud based Email scanning, as well as managed services.</p> <p>The managed services offer the Commonwealth 24x7 monitoring and alerting of incidents, depending upon the severity of the incident. The managed offering will include the development of a detailed incident response plan, which will be presented to the Commonwealth for approval prior to implementation.</p> <p>The managed service will provide the following:</p> <ul style="list-style-type: none"> <li>▪ Comprehensive service logging, monitoring and reporting</li> <li>▪ Policy Management - Policy Management will allow the Commonwealth to call on the experience of Verizon's operations staff at any time to make configuration changes to agency security policy. Verizon deploys its extensive network security expertise to validate, design and implement changes to the policy. Requests for insecure changes are identified and avoided, thus helping to ensure that a robust security policy is maintained.</li> <li>▪ Platform Management - Verizon looks after the day-to-day maintenance and management of the security system, performing software updates, configuration changes and configuration backups to keep the system running reliably and securely.</li> <li>▪ Routine patching</li> <li>▪ Change management</li> <li>▪ Customer Management Portal</li> <li>▪ Incident Management and Escalation Process</li> <li>▪ Remote System Management and Rebuild - Once the hardware replacement has been provided—facilitated by Verizon—a remote system rebuild can commence. The SSA and Out-of-Band remote management kit are used to restore the security device using the most recent configuration within a matter of hours.</li> </ul>

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			<ul style="list-style-type: none"> <li>Reporting - A wealth of reporting options is provided via the ISIS Portal. These reports provide information about details of alerts, system availability statistics and graphs, system resource usage and policy modification events. Reporting parameters are flexible and report data can be downloaded in CSV format to allow tailored reporting.</li> </ul>
1.449	Auditing		
1.450	The Offeror shall permit the Commonwealth to perform security risk assessments by a qualified and approved security vendor on an annual or as needed basis to supplement internal auditing and compliance activities.	Y	
1.451	<i>The Offeror shall describe its strategy for providing each of the following services to Commonwealth locations: local exchange calls, intraLATA calls, interLATA calls within Pennsylvania, interstate calls, and international calls.</i>	Y	<p>Verizon's strategy for basic dialtone and local exchange calls is to leverage the ILEC infrastructure we already have in place in PA to provide these services. Where Verizon is not the ILEC provider, we will leverage our relationships with the other ILECS to secure statewide coverage for local services. Verizon will provide Centrex, a managed, network-hosted communications service for the majority of the Commonwealth locations and will provide PRI and IP trunking services to support Commonwealth PBX and Key system locations.</p> <p>Verizon's strategy for delivering intralata, interlata, interstate and international services is to leverage our Outbound Long Distance portfolio of services. Outbound Long Distance is a worldwide facilities-based voice service with the capability of transporting the Commonwealth's traffic from origination to termination, over one network in many locations. This wholly owned, local-to-global-to-local network will help simplify long distance communications, with the potential to reduce calling expense and increase productivity for Commonwealth agencies. Verizon will also leverage our security and fraud detection systems which are recognized as one of the most advanced in the industry to help minimize fraud for the Commonwealth.</p> <p>Verizon's digital and Voice over IP switch platforms are selected and approved for the Network, providing quality current and future services and features to the</p>

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			Commonwealth. These switch technologies will provide the hub for dial tone services offered within this Proposal. These platforms' sophisticated trunk connectivity to the local, inter-LATA, intra-LATA, interstate and international toll and private networks will likewise provide the quality current and next generation transport needs and requirements of the Commonwealth.
1.452	The Offeror shall complete an independent SAS70 audit on an annual basis and provide the results to the Commonwealth.	Y	Verizon proposes to modify this provision as follows: The Offeror shall complete an independent SAS70 audit on an annual basis on the relevant services and provide the results to the Commonwealth.
1.453	Incident Response		
1.454	<i>The Offeror shall describe the process of how security incidents and breaches are reported to the Commonwealth Computer Incident Response Team.</i>	Y	Incidents that are detected by the offeror's 24/7 managed security services team will be reported to the Commonwealth depending on their severity and the reporting procedures requested by the Commonwealth. Typical reporting methods are by phone call and/or e-mail. The managed security services team will follow an escalation matrix for such reports as provided by the Commonwealth, and routinely accommodates different reporting and escalation procedures for business hours and "out of hours". In addition, all incidents are visible on a secure portal.
1.455	The Offeror shall comply with to the Commonwealth's Computer Incident Response Team standards and policies.	Y	
1.456	The Offeror shall develop a Commonwealth incident response plan for cyber security events and threats and provide it to the Commonwealth for approval.	Y	

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1.457	The Offeror shall provide all security logs for a particular event and/or troubleshooting upon request.	Y	
1.458	The Offeror shall remediate any critical information security related vulnerabilities affecting managed devices within 24 hours in coordination with the Commonwealth.	Y	
1.459	Device Management and Integration		
1.460	The Offeror shall maintain current documentation on all managed devices to include device identification, operating systems versions, patch levels, configuration settings, and change history. This documentation must be securely available online to the Commonwealth for the duration of the contract.	Y	

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1.461	The Offeror shall ensure that both hardware and software is maintained at manufacturer's current supported and release level as coordinated with the Commonwealth.	Y	
1.462	The Offeror shall ensure that all managed devices must have the ability to feed its logs into the Commonwealth security information and event management system.	Y	
1.463	<i>The Offeror shall describe how security technologies are used throughout the network to obtain visibility into network behavior and to apply control over questionable network behavior.</i>	Y	<p>The following key security technologies are used to provide these functions:</p> <p><b>Firewalls</b> – Will be used to secure the Commonwealth’s environment from the Internet and also provide the flexibility to create multiple DMZ’s for functions such as Remote Access, Business Partners, and others, such as server farms or applications requiring Internet accessibility and special security policy.</p> <p><b>Intrusion Prevention System</b> – IPSs will be another essential part of the Enterprise Security architecture, providing stateful protection from the network and higher layer vulnerabilities such as worms, trojans, spyware, key loggers and some malware from either entering or exiting and propagating through the Commonwealth network.</p> <p><b>Content filtering and Proxy</b> – This solution will provide the ability to define and implement an acceptable Internet use policy for Internet access with the ability to limit Web access by white-listing and black-listing URLs and also limiting streaming and Internet Messaging type traffic. Additionally, this will provide capabilities to authenticate the various Commonwealth users and apply policy accordingly.</p> <p>In addition visibility and control of the network are obtained by a “defense in depth” approach, deploying firewalls and IPS devices inside the network and/or leveraging existing firewalls and IPS equipment at the agency level. When these devices are enrolled into Verizon’ managed security services offering, they are configured to send log data to one or more “Security Service Appliances” (SSAs) inside the Commonwealth’s network. The SSA correlates log data and generates events from</p>

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			questionable or noteworthy behavior. These events are then sent through a secure, encrypted channel to the Verizon data centers, where a second correlation engine called "ISIS" correlates them into incidents. Incidents are reviewed and actioned 24/7 by trained security personnel at the Verizon SOCs.
1.464	<i>The Offeror shall describe how network security will be managed between agency networks and the Internet.</i>	Y	The proposed design calls for a centralized Enterprise-class security layer between all of the Commonwealth's networks and the Internet. This layer would exist in two physical locations to meet the Commonwealth's uptime SLA requirements. The security layer would employ network firewalls, network IPS devices, and content control devices for web and IM traffic. Per-agency security rules could be requested by the Commonwealth.
1.465	<i>The Offeror shall describe how network security will be managed between agency networks on the trusted internal Commonwealth network.</i>	Y	Network security between agency networks on the trusted internal Commonwealth network would rely on a "defense in depth" approach, leveraging existing agency network firewall and IPS devices where possible and appropriate, and deploying new network firewall and IPS devices as required by the Commonwealth.
1.466	Demilitarized Zone		
1.467	The Offeror shall provide the capability to extend the Internet demilitarized zone (DMZ) to multiple locations.	Y	
1.468	<i>The Offeror shall describe how it will extend the Internet DMZ to multiple locations.</i>	Y	Verizon offers two options to extend the Commonwealth's Internet DMZ in the following ways: <ul style="list-style-type: none"> <li>▪ The preferred option is to use IPSEC tunnels originating from the Enterprise/Internet Firewalls and terminating on the firewalls at the various locations/agencies where the DMZs are desired.</li> <li>▪ A second option is to use routers and route traffic from a DMZ segment of the Enterprise firewalls to the corresponding segment of the desired DMZ location.</li> </ul>
1.469	Intrusion Prevention Systems		

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1.470	The Offeror shall provide the Commonwealth with a redundant and diverse Enterprise network-based Intrusion Prevention Services (IPS) solution.	Y	
1.471	<i>The Offeror shall describe its redundant and diverse Enterprise network-based IPS solution.</i>	Y	Redundancy and physical diversity are achieved by deploying two highly available pairs of IPS devices at two separate physical locations, one pair per location. Traffic will be balanced between the two physical locations in normal operation, and fail to either one location should the "sister" location become unavailable.
1.472	The Offeror shall offer the Commonwealth a redundant and diverse agency network-based IPS solution.	Y	
1.473	<i>The Offeror shall describe its redundant and diverse agency network-based IPS solution.</i>	Y	The agency network-based IPS solution will leverage existing agency network IPS devices where possible and appropriate, and deploy new network IPS devices as required by the Commonwealth. Redundancy can be achieved by deploying highly available pairs of IPS devices, or augmenting existing devices to become highly available.
1.474	Various Security Requirements		
1.475	<i>The Offeror shall describe a transition plan to migrate from the current security architecture and configuration to the proposed solution.</i>	Y	The Security transition plan will be a part of the larger Enterprise Network Migration plan, and will be implemented in coordination with the various interdependent elements of the Enterprise Architecture.  The proposed Security transition plan will make full use of the physically diverse design of the Enterprise Network Security solution. The secondary site will be implemented and tested first. Once tests are successful, traffic balancing between the existing security architecture at the primary site and the secondary site will be implemented and tested, and rolled out to the Commonwealth's networks in a staged manner. At this point, traffic may be "failed over" to the secondary site, and the existing security architecture at the primary site can be replaced and the new implementation tested. As a final step, the "fail over" configuration will be removed and traffic will balance between both sites again.

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			All work that has the potential to interrupt the Commonwealth's network traffic will be carried out during Commonwealth maintenance windows. Application tests will be carried out by the Commonwealth in coordination with the migration to ensure that applications in use by the Commonwealth remain functional after the change.
1.476	The Offeror shall ensure that staffing resources involved with the design, implementation, transition, administration, and support of all functions within the managed services have training, certification, hands-on working experience.	Y	
1.477	The Offeror shall provide a matrix of the staffing resources involved with the design, implementation, transition, administration, and support of the managed services solution. This must include their training, certifications, experience, qualifications and responsibilities.	Y	
1.478	<i>The Offeror shall describe any additional security services such as but not limited to: web proxy services, application firewall services, etc.</i>	Y	Verizon offers a variety of managed services, all based on best-of-breed vendor solutions as well as a comprehensive suite of Professional Security Services. Some of the Managed Security Services include: <ul style="list-style-type: none"> <li>▪ Web proxy services are based on BlueCoat ProxySG, both in "reverse proxy" deployment for use with Commonwealth-owned web farms and "forward proxy" deployment for outgoing Commonwealth web traffic.</li> <li>▪ Application firewall services are based on F5's "Big IP" line of application firewalls.</li> <li>▪ Network load balancing services are based on F5's "Big IP" line of network load balancers or Citrix "Netscaler" load balancers.</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ WAN acceleration services would allow the Commonwealth to preserve costly WAN bandwidth and to consolidate services such as file storage and Exchange E-Mail while delivering “LAN-like” performance to users. Verizon offers WAN acceleration services based on Juniper WX appliances, BlueCoat ProxySG appliances and Citrix “WANScaler” appliances.</li> <li>▪ Strong authentication services would enable the Commonwealth to leverage its existing PIV infrastructure by strengthening the “tie-in” of that infrastructure to other network services, simplifying the management of that infrastructure, and expanding the reach of that infrastructure as desired by the Commonwealth. Verizon delivers authentication solutions based on ActivIdentity and RSA appliances. In the PIV space, Verizon views ActivIdentity as the leading vendor.</li> </ul> <p>Some of the Professional Security Services include network security assessment, evaluation and penetration testing services. The methodology employed for these assessments and evaluations follows closely the NSA’s IAM and IEM – “Infosec Assessment Methodology” and “Infosec Evaluation Methodology” and employs state-of-the art tools for evaluations and penetration tests.</p> <p>Verizon also offers design, implementation, support and managed services for a wide range of network and network security services.</p>
1.479	Business Partner Connectivity		
1.480	The Offeror shall ensure that all data communication services with the exception of Internet access via the Commonwealth network are available to Commonwealth Business Partners.	Y	
1.481	<i>The Offeror shall describe the security solution proposed for authorized and monitored access for Commonwealth Business Partners.</i>	Y	<p>The Security solution for the authorized and monitored access of Business Partners is addressed as part of the design of the Enterprise Internet Architecture. Please see the Technical Solution for the diagram.</p> <p>In this design, Business Partner connections will terminate in a dedicated DMZ off of the Enterprise firewalls so that special Security policy can be applied for Business Partner connections and their unique requirements. Additionally, business partner connections</p>

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			can still leverage the Commonwealth's authentication/authorization standard before being granted access to particular resources within the Commonwealth environment. Therefore, part of this solution will include authentication/authorization per Commonwealth standards, firewall rules for each partner along with logging and monitoring of that access.
1.482	The Offeror shall provide the Commonwealth with a Business Partner DMZ solution.	Y	
1.483	<i>The Offeror shall describe the Business Partner DMZ solution.</i>	Y	The Business Partner DMZ will be a dedicated DMZ and connected to the Enterprise firewalls, so that a special Security policy can be applied for Business Partner connections and their unique requirements. Business partners can be connected to the Commonwealth business partner DMZ by means of an IPSEC VPN or a dedicated WAN connection.  This solution will include authentication/authorization per Commonwealth standards. Firewall rules would be applied for each partner along with the logging and monitoring of that access.
1.484	Physical Access		
1.485	<i>The Offeror shall describe its approach to physical access to Offeror owned equipment at Commonwealth facilities.</i>	Y	Verizon deploys securely encrypted out-of-band access devices as part of its "SecureManage Premium" fully managed security service. The OOB devices give Verizon the ability to remotely power-cycle equipment and to remotely rebuild equipment through serial console access after an RMA. This reduces the need for physical access greatly.
1.486	<i>The Offeror shall describe its approach to physical access to Offeror owned equipment at Offeror facilities.</i>	Y	Normal operation will not require any physical access to this equipment. Only limited access will be required in the case of outages. At such times, physical access will be coordinated and only authorized personnel will be allowed access.

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.487	The Offeror shall provide authorized Commonwealth personnel physical access upon request to Offeror owned equipment at Offeror facilities.	Y	
1.488	Email Scanning and Instant Messaging		
1.489	The Offeror shall provide an enterprise class integrated messaging service (e-mail scanning) that protects the integrity of the Commonwealth's network from actual and potential damage caused by e-mail threats and addresses regulatory compliance requirements.	Y	
1.490	<i>The Offeror shall describe an enterprise class integrated messaging service (e-mail scanning) that protects the integrity of the Commonwealth's network.</i>	Y	<p>Verizon recommends a cloud based email scanning solution based on Webroot. Webroot E-Mail Security is a security service that resides outside your network, requiring no additional or on premise hardware, software, or personnel resources to manage daily security operations. Services offered in this response include:</p> <ul style="list-style-type: none"> <li>▪ Email Auditing - real time access to logs</li> <li>▪ Inbound Spam and AV</li> <li>▪ Inbound &amp; Outbound Content and policy filtering</li> <li>▪ Outbound AV filtering</li> <li>▪ 7 days of mail queuing</li> <li>▪ Management Interface - Admin and end user</li> <li>▪ Real Time Reporting - scheduled reporting</li> <li>▪ DDoS and DHA protection</li> </ul>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p>This offering includes dynamic virus and spam filters to protect against 98% of e-mail spam, including so-called “phishing” emails, and 100% of known viruses. Webroot’s content filtering and data archiving capabilities prevent against data loss and help to fulfill compliance and data storage requirements. Customer deployment can be complete in one to four days. Webroot also guarantees a 99.999% service availability to ensure that customers have access to a secure e-mail communications environment.</p> <p>Webroot E-Mail Security offers a Content Control management suite which implements a customizable rules engine, which facilitates both content and event-based e-mail management while providing highly sensitive levels of control regarding inbound and outbound e-mail traffic. The service allows users to control where messages are sent and how they should be filtered based on specified criteria. Rules can be set for a number of different situations, either as an individual occurrence or as a combination of complex business events. Besides standard e-mail actions such as block, copy, and redirect, rules can be used to alert or trigger other systems such as HR, CRM, ERP or workflow.</p> <p>Webroot E-Mail Security offers the option to deploy filters for images embedded in email. When images are scanned, their dataflow (shape, color, texture, etc.) is converted into a digital signature which is then compared against known pornographic images. If the image is similar to those blacklisted images, the e-mail content is classified as pornographic and action may be taken to either delete or quarantine the e-mail. All messages containing suspect images are logged.</p> <p>Finally, Webroot E-Mail Security offers a web-based administrative dashboard to view summary data as well as on-demand, customizable reports.</p> <p>Also, <b>optionally</b> available are encryption services, business continuity and archiving services.</p> <p>Webroot E-Mail Security offers encryption services, both between messaging servers and desk-to-desk email encryption via asymmetric keys. Messaging server encryption can be mandated, or be enabled on a “best case basis”, where the transport will be encrypted if the target messaging server supports encryption.</p> <p>Webroot E-Mail Security offers business continuity and archiving services. The continuity solution ensures that off-site resources are constantly active during normal operation as well as when disaster hits. The service enables 28 days of inbound and outbound e-mail to be available from secure, mirrored data stores to end users via webmail. The webmail alternative allows users to send and receive e-mail from any browser worldwide, ensuring important communication is not lost during crises.</p>

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			Archiving enables organizations to securely capture, store, and index all inbound and outbound e-mail traffic in real-time. Once captured, these e-mails are stored in duplicate and geographically disparate data centers, thus protecting data against physical loss or corruption.
1.491	The Offeror shall provide a secure Instant Messaging solution.	Y	
1.492	<i>The Offeror shall describe its secure Instant Messaging solution.</i>	Y	<p>Verizon offers a managed secure Instant Messaging solution based on the Microsoft OCS platform. Verizon's Managed Service for Microsoft Office Communications Server (OCS) offering combines instant messaging (IM), presence, conferencing, and VoIP (Voice over IP) telephony options in a fully integrated Unified Communications solution. Office Communications Server 2007 provides rich presence capabilities, enhanced support for group IM, and improved deployment and management over its predecessor, Microsoft Office Live Communications Server 2005 SP1.</p> <p>This service offering can be provided in one of Verizon's five premium Smart Centers, at a Verizon or third-party collocation facility, or on the Commonwealth's premises. If not housed in a Smart Center, by default, hardware and software are the responsibility of the Commonwealth.</p> <p>For existing features, such as federation and public IM connectivity, Office Communications Server 2007 includes real-time conferencing hosted on servers inside the customer organization's firewall and a full-featured, software-powered VoIP solution that can stand on its own or integrate easily with an existing PBX infrastructure.</p> <p>Verizon's Managed Office Communications Server (OCS) offers security and privacy, and it integrates with Microsoft Exchange to offer instant messaging (IM) and presence as part of a scalable, enterprise-wide solution. Verizon's Managed Office Communications Server provides proactive monitoring and management of the customer's steady-state OCS environment and may include multiple domains within the customer enterprise.</p> <p>Upon completion of a successful implementation, Verizon assumes operational support responsibility for Microsoft Office Communications Server and supporting systems. Support for this service can be achieved remotely through a combination of locally provided support, and remote monitoring and control hardware and software. Verizon interacts with assigned customer employees, systems and vendors as identified within the Statement of Work to manage the remote domain systems. All patching, updates</p>

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			and non-administrative change activities are executed within a defined Change Control Request (CCR) process, which is developed and agreed to during the on boarding process with the customer (when the customer is transitioned over to the service).
1.493	Firewall Management		
1.494	The Offeror shall provide a fully managed enterprise firewall solution for all Commonwealth traffic. This solution is not subject to the current Commonwealth firewall product standard.	Y	
1.495	<i>The Offeror shall describe the fully managed enterprise firewall solution.</i>	Y	<p>Secure Manage is a fully managed service for firewalls where everything needed to maintain a healthy and secure firewall is included. Verizon® Secure Manage can be extremely effective in reducing the day-to-day operational burden on already overstretched internal IT staff allowing them to focus on more strategic security challenges. Managed firewalls can be linked together to provide sophisticated VPN (Virtual Private Network) infrastructures, all fully managed and maintained by our experienced engineers.</p> <p>The service includes:</p> <ul style="list-style-type: none"> <li>▪ 24x7 Monitoring and alerting</li> <li>▪ System Health monitoring</li> <li>▪ System Availability checks</li> <li>▪ Platform management</li> <li>▪ Rulebase Management</li> <li>▪ Remote System Rebuilds</li> <li>▪ Reporting (via a Secure Web Portal)</li> <li>▪ Service Level Agreement</li> </ul> <p>A datasheet describing the unique architecture used to deliver this service will be made available upon request.</p>

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.496	<i>The Offeror shall offer and describe a fully managed agency firewall solution. This solution is for systems subject to the current Commonwealth firewall product standard.</i>	Y	Verizon Managed Security Services includes support for Checkpoint firewalls as described in the Commonwealth firewall product standard. The same service available to the Commonwealth (Secure Manage) would also be available to agencies. Verizon is able to “chain” access to managed devices through the Commonwealth’s enterprise management infrastructure upon request, so that no inbound connection between the Internet and agency networks would be required.
1.497	<i>The Offeror shall offer and describe a co-managed agency firewall solution that allows agencies to manage its own rule base and firewall logs. This solution is for systems subject to the current Commonwealth firewall product standard.</i>	Y	Verizon Managed Security Services includes support for Checkpoint firewalls as described in the Commonwealth firewall product standard. SecureManage Classic” is a managed service, like the fully managed “Secure Manage Service” without log correlation and can be delivered with optional rulebase management, should the agency in question desire the ability to call upon Verizon for rulebase changes on a case-by-case basis. Platform management and remote system rebuilds are an option for this service. No Service Level Agreement is available. Alternatively, agencies may opt for “SecureManage Premium” with a co-managed option. This is a fully managed service that allows agencies full control over their rulebase.
1.498	<i>The Offeror shall offer and describe a fully managed agency firewall solution. This solution is for systems not subject to the current Commonwealth firewall product standard.</i>	Y	Verizon can support a variety of solutions, including all leading firewall vendors, and would make a recommendation for a Firewall solution based on the individual agency requirements. Secure Manage is a fully managed service for industry leading firewalls where everything needed to maintain a healthy and secure firewall is included. Verizon® Secure Manage can be extremely effective in reducing the day-to-day operational burden on already overstretched internal IT staff allowing them to focus on more strategic security challenges. Managed firewalls can be linked together to provide sophisticated VPN (Virtual Private Network) infrastructures, all fully managed and maintained by our experienced engineers. The service includes: <ul style="list-style-type: none"> <li>▪ 24x7 Monitoring and alerting</li> <li>▪ System Health monitoring</li> <li>▪ System Availability checks</li> <li>▪ Platform management</li> <li>▪ Rulebase Management</li> </ul>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<ul style="list-style-type: none"> <li>▪ Remote System Rebuilds</li> <li>▪ Reporting (via a Secure Web Portal)</li> <li>▪ Service Level Agreement</li> </ul> <p>A datasheet describing the unique architecture used to deliver this service will be made available upon request.</p>
1.499	<i>The Offeror shall offer and describe a co-managed agency firewall solution that allows an agency to manage its own rule base. This solution is for systems not subject to the current Commonwealth firewall product standard.</i>	Y	<p>Verizon can support a variety of solutions, including all leading firewall vendors, and would be make a recommendation when desired, depending on the individual agency requirements.</p> <p>SecureManage Classic” is a managed service, like the fully managed “Secure Manage Service” without log correlation and can be delivered with optional rulebase management, should the agency in question desire the ability to call upon Verizon for rulebase changes on a case-by-case basis. Platform management and remote system rebuilds are an option for this service. No Service Level Agreement is available.</p> <p>Alternatively, agencies may opt for “SecureManage Premium” with a co-managed option. This is a fully managed service that allows agencies full control over their rulebase.</p>
1.500	<i>The Offeror shall provide and describe its fully managed, scalable, redundant, end to end encrypted, two factor authentication, clientless remote access solution to the enterprise and business partners.</i>	Y	<p>The proposed solution deploys highly available pairs of SSL VPN appliances at two physical locations. The appliances chosen for the proposed design will scale to 10,000 concurrent users per appliance through the addition of user licenses, and can be scaled further than this by changing the design to be load-balanced.</p> <p>The remote access solution does not require a separate client and can be accessed from any Web browser. An optional “thin client” that is delivered through the Web browsing session may be deployed to allow a remote user Layer-3 access to the Commonwealth’s networks, similar to a “thick client” IPSEC VPN solution.</p> <p>The proposed design will integrate with any authentication mechanism the Commonwealth wishes to leverage or deploy, including the PIV two-factor authentication currently deployed by the Commonwealth. Verizon would be happy to provide additional or expanded two-factor authentication solutions to integrate with the remote access solution should the Commonwealth desire.</p> <p>Enterprise and business partner users may use the system concurrently. Access to Commonwealth resources can be granted on a per-user or user group basis. The Commonwealth has the option of choosing or designing separate “landing pages” for business partners, should it so desire.</p>

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.501	Authentication		
1.502	The Offeror shall leverage the Commonwealth's Public Key Infrastructure for authentication when digital signatures are required.	Y	
1.503	The Offeror shall integrate user authentication for remote access with the Commonwealth's current standards.	Y	
1.504	Remote Access		
1.505	The Offeror shall provide the Commonwealth with a redundant Remote Access Solution supported by two physically diverse Remote Access servers.	Y	
1.506	The Offeror must provide number portability to maintain all local and toll-free access numbers currently in use for the Commonwealth's dial-in remote access services or provide a migration plan to convert to other access numbers.	Y	



Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.507	The Offeror shall ensure that toll-free numbers for the Commonwealth dial-in access are part of a turn-key solution for the remote access service.	Y	
1.508	The Offeror shall provide a customized dialer component that provides automated selection of the local access number for individual dial access users.	Y	
1.509	The Offeror shall provide network access control for the remote access solution.	Y	
1.510	<b>Web Content Filtering</b>		
1.511	<i>The Offeror shall describe an Enterprise-wide web content filtering solution that provides the Commonwealth the ability to implement global rule settings, access for defined administrators and the ability to allow different levels of Internet access based on user and/or group settings.</i>	Y	<p>Verizon is offering a Bluecoat Proxy-based Web filtering solution. BlueCoat ProxySG is a Web filtering/caching solution with a strong authentication component. It will integrate with existing user authentication solutions, such as, but not limited to, Active Directory, eDirectory, LDAP or RADIUS.</p> <p>Administrator authentication can also be tied to external authentication mechanisms, or be maintained "on box" with passwords, depending on configuration. Rules are primarily created through a graphical interface and can be restricted in scope by both IP addressing and user authentication results, including group membership.</p> <p>For the Enterprise-wide Web content filtering solution to be aware of the authentication credentials of all users, including agency users, a technical solution that allows the agency user credentials to be queried will need to be devised in co-operation with the agencies.</p>

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.512	<p><i>The Offeror shall describe an Enterprise-wide web content filtering solution that will provide agency access to add specific rules and the ability to bypass the global rule set without modification of global settings.</i></p>	Y	<p>Blue Coat offers an ISP tool that resides on a Windows server, which provides specific agencies the ability to add and remove URLs and categories to bypass the global rule set without modification of global settings. In the third quarter of 2009, Blue Coat Systems will implement this technology on box as a software upgrade.</p>
1.513	<p><i>The Offeror shall describe an Enterprise-wide web content filtering solution that provides the Commonwealth the ability to create custom categories for web content, an auditing mechanism to verify security of web usage data and the ability to integrate with Microsoft Active Directory user repositories.</i></p>	Y	<p>BlueCoat ProxySG supports both custom groups of URLs or entire domains, thereby allowing the Commonwealth to use those for white-listing, black-listing, or just “special treatment” depending on time of day, user group, etc.</p> <p>BlueCoat Enterprise Reporter is a reporting engine that runs on a Windows server and will provide reports on all user Web activities. The vendor describes the report capabilities as follows:</p> <p><b>Administrator/HR View</b></p> <p>Reporter provides information to meet the needs of different network administrators and HR departments. For example, administrators will want to understand the impact of users on their network in terms of amounts of data downloaded. HR departments want to know when and where users are going on the Internet. Filtering, Content and User reports are keys to these personnel.</p> <p><b>Security View</b></p> <p>Security administrators can evaluate risks and track user activity that is potentially dangerous and quickly determine users with malicious content, including spyware. They can also view a security analysis with sub-reports that include virus IDs, virus IP detail, virus URL detail and virus user detail. Security views provide administrators with greater visibility into the strength and stability of their network.</p> <p><b>Technical View</b></p> <p>Network administrators can use Reporter to measure Web traffic performance, trends, errors, bandwidth impact, streaming traffic levels and more. Technical reports include information for response codes, processing actions, operations, upload MIME types, Web browsers and operating systems. Comprehensive and custom reports allow for analysis to track user and enterprise Web activity by user or geography.</p>

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1.514	<i>The Offeror shall describe an Enterprise-wide web content filtering solution that provides the Commonwealth the ability to filter web content based on quotas/bandwidth and the ability to filter instant messaging traffic.</i>	Y	As part of Verizon's Web Content Solution, the BlueCoat ProxySG has the ability to enforce bandwidth quotas on Web traffic, including streaming media traffic. A typical application would be to throttle streaming media during popular events, such as a presidential inauguration or "March Madness". Similarly, large download traffic can be throttled.  BlueCoat ProxySG supports filtering of the most popular Instant Messaging protocols, including AIM, Yahoo Messenger and MSN client. A comprehensive solution would be to block other IM clients at the firewall and redirect approved client's traffic through the BlueCoat ProxySG.
1.515	<b>HELP DESK SERVICES</b>		
1.516	The Offeror shall provide a consolidated and integrated, 24x7x365 days Help Desk to support Commonwealth Contract Participants.	Y	
1.517	The Offeror shall ensure that the help desk will be located within the United States.	Y	
1.518	The Offeror's Help Desk shall serve as a single point of contact for all services provided by the Offeror.	Y	
1.519	The Offeror shall be responsible for the purchase of software, licenses, hardware, staff training and all development required to integrate with the Commonwealth's Remedy Systems.	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.520	The Offeror's Help Desk system shall provide a common web interface that allows all Contract Participants the ability to search, query, print, and review trouble tickets.	Y	
1.521	The Offeror's help desk system shall ensure all tickets, regardless of ticket status or generation source, must remain accessible to Contract Participants at all times and must have search/query capability.	Y	
1.522	The Offeror shall retain all help desk data in its original format for online access and historical purposes for the term of the Contract, including extensions.	Y	
1.523	The Offeror shall ensure all help desk reporting activities are logged by the Offeror, detailed, and accessible to all Contract Participants in a case log format.	Y	
1.524	The Offeror shall provide all Contract Participants with Standard Operating Procedures to include all information and troubleshooting the Offeror requires from the Commonwealth to have the trouble tickets escalated.	Y	

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1.525	The Offeror shall accept help desk requests via voice, email, online web form, or transfer via Remedy DSO to the help desk.	Y	
1.526	The Offeror shall not reject or refuse to accept a trouble ticket based on incomplete troubleshooting/information provided by the Contract Participants help desks.	Y	
1.527	The Offeror shall accept individual trouble tickets referencing the same incident from more than one Contract Participant.	Y	
1.528	The Offeror's help desk system shall accept multiple attachments to each trouble ticket	Y	
1.529	The Offeror shall generate a help desk ticket and notify Contract Participants upon detection by the Offeror's NOC when critical alerts and all service failures occur.	Y	
1.530	The Offeror shall work with the onsite contacts listed in the trouble ticket for further troubleshooting/information in regard to a trouble tickets and not the Contract Participants help desks.	Y	

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1.531	<i>The Offeror shall describe how field technicians will access and provide timely updates to the trouble ticket case logs.</i>	Y	Field technicians will contact the Help Desk via phone to provide updates to trouble ticket case logs. The standard protocol will be for field technicians to call in a resolution status as each service call is concluded. Help Desk Representatives will make real-time updates to trouble ticket case logs based on the input given by the field technicians, resulting in an up-to-date status for a trouble ticket at any given time.
1.532	The Offeror shall call or email the ticket requestor, prior to closing any ticket, to ensure that the incident has been resolved to the satisfaction of Contract Participants.	Y	
1.533	The Offeror's help desk system shall provide notifications to contacts and ticket requestors regarding the status of their trouble tickets.	Y	
1.534	<i>The Offeror shall describe the help desk standard operating procedures for incident resolution.</i>	Y	<p><b>Resolution Process</b></p> <p>The Help Desk uses the Incident Management System to track the details of every call via a trouble ticket, which includes the following:</p> <ul style="list-style-type: none"> <li>▪ Customer's Name</li> <li>▪ Customer's Location</li> <li>▪ Type of Incident Reported</li> <li>▪ Trouble-Shooting Steps Taken</li> <li>▪ Resolution</li> </ul> <p>When a call is received, a representative will identify the caller type and then determine the incident classification to maintain a streamlined system of recording the content of each call as well as tracking overall program call history. Our Incident Management knowledge base details issue types, troubleshooting steps and suggested solutions for resolution. Troubleshooting steps for each issue type (hardware, software, sales, order placement, etc.) are customized for each customer and reviewed and updated as necessary based on program changes.</p>

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			<p><b>Two-Tiered Approach</b></p> <p>The majority of issues are resolved on the first call, and all issues or questions that are resolved during the call result in the closure of the ticket.</p> <p>If the representative is <i>not</i> able to resolve the issue on the first call, the Incident Management system ticketing/workflow management software routes the ticket to the appropriate group(s) to resolve the issue in a timely manner.</p> <p>Trouble ticket notification/escalation is based on ticket priority and time-to-resolve criteria. Ticket routing and escalation can be modified to suit individual program needs.</p>
1.535	The Offeror shall provide multi-tiered response/resolve time criteria based on locations.	Y	
1.536	The Offeror's Remedy system shall be capable of integrating with all Remedy modules utilized by the Commonwealth. (Including: help desk, asset management and change management).	Y	
1.537	The Offeror's help desk system shall support the bi-directional, electronic transmission of tickets for all Contract Participant help desk systems.	Y	
1.538	The Offeror's help desk system shall generate monthly reports, separate for each Contract Participant, which lists with details all of the trouble tickets opened for that particular month.	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.539	The Offeror shall provide examples of summary and detail reports from the help desk system that will be provided to the Commonwealth.	Y	
1.540	The Offeror shall include programming of all agreed upon SLAs into the Remedy ticket tracking software. All Contract Participants should be able to run reports on missed SLAs to include response and resolve times.	Y	
1.541	<i>The Offeror shall describe the process used to recruit, retain and develop help desk technicians.</i>	Y	<p>Verizon has chosen Adept Consulting Services, who recently merged with TeamPMO, to perform the help desk functions to support the proposed Verizon services for the Commonwealth. Adept has earned the reputation for providing an “employee friendly” company culture, with a positive work environment that has directly resulted in one of the lowest employee turnover rates for any small company in Central PA – the average for the last 10 years has been 22% lower than the national average – or 4.26%. A low employee turnover rate produces savings in time, money and reduces overall project risks – all benefits to the Commonwealth.</p> <p>The Adept senior management team is well seasoned in searching, screening, onboarding and retaining help desk staff for more than 14 years for Commonwealth projects. They use all the latest search tools and databases, complemented by an experienced management team that can select the right people into the right positions. The Adept management teams averages over 25 years of IT industry experience and more than 12 years of Commonwealth project experience. In addition, through a series of interviews and screening process, Adept selects only the candidates that have the right attitudes for help desk and customer service, and have a desire to work long-term for a small, locally based company.</p> <p><b>Performance &amp; Productivity Metrics for Help Desk Technicians:</b></p> <p>Adept has a proven track record of hiring qualified, experienced professionals, and providing the proper level of on-going training and support for every consultant to</p>

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			<p>succeed. In addition to the company hiring methodology, there are set metrics for the project management team and help desk team leader to follow for the overall performance and productivity of the help desk technicians. This structure ensures that the help desk team is as effective and productive as possible. These metrics directly translate into performance bonuses for each member of the management team, as well as the help desk staff. Everyone has a vested interest in delivering high quality customer support, every day, to all Commonwealth customers. The Adept financial model for attracting and retaining skilled IT talent in Harrisburg is to pay more than the local market average, provide full coverage and benefits for employees and their families, provide an inclusive, friendly work atmosphere for all employees, and to treat employees with respect and appreciation throughout the year.</p> <p>Adept will effectively train the help desk staff on the specifics of this consolidated project and the Commonwealth's expectations for support for all end users. Training will occur on several levels:</p> <ul style="list-style-type: none"> <li>▪ Senior help desk consultants initially train each new help desk technician on all of the daily requirements and SLAs of the project.</li> <li>▪ The management team and help desk team leader are responsible for additional extensive training, and on-going training of each technician through the life of this contract.</li> <li>▪ Ongoing education in several areas of self-paced and instructor led courses to keep all help desk technicians on the leading edge of their technical support skills and their industry knowledge as a whole.</li> </ul>
1.542	<b>DISASTER RECOVERY SERVICES</b>		
1.543	The Offeror shall jointly develop with the Commonwealth a comprehensive and detailed disaster recovery and business continuity plan (DRBCP).	Y	

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.544	<p><i>The DRBCP shall describe how communication, both voice and data, would be protected and/or recovered from interruption should a catastrophic event occur.</i></p>	Y	<p><b>Network Design</b></p> <p>Verizon has invested substantial time and expense in building a highly reliable, self-healing network to ensure excellent telecommunications service with a minimum of interruption for its customers. Verizon is constantly upgrading the network to improve its performance and reliability, and has a number of systems and procedures in place to respond to network issues.</p> <p>The Commonwealth can receive fast, reliable telecommunication service over Verizon local city networks. Verizon utilizes SONET (Synchronous Optical Network) technology - an industry standard for high-speed transmission over optical fiber - to construct our networks. Verizon selected SONET ring construction because of its self-healing architecture and ability to transport ultra-high speed digital signals with differing capacities, such as voice, data, and video telecommunications.</p> <p>Self-healing fiber rings minimize the risk of outage by utilizing a circular configuration. Two paths are available at all times - if an outage is detected anywhere along the ring, traffic is automatically routed in the other direction. Self-healing fiber rings can re-route traffic almost instantly - in most cases you do not even realize that a cut has occurred. This provides the Commonwealth with the highest reliability offered by any telecommunications company today.</p> <p><b>Network Technology</b></p> <p>Verizon uses a wide array of technology, systems, and platforms to support its customers. Each technology in use has its own specific strategy for ensuring availability. Where business models and customer requirements dictate, Verizon incorporates “real-time” restoration capabilities into applications and networks that are considered mission critical.</p> <p><b>Network Restoration</b></p> <p>Verizon’s outbound and inbound network services, when disrupted, are restored through a combination of automatic and manually invoked processes. Specific redundancy and backup are inherent to many of the transmission hardware systems (such as fiber optic electronics) employed by Verizon today. However, for service affecting conditions, such as major network outages, it is Verizon’s policy to rapidly assess each situation in terms of the specific causal factors, and react accordingly to effect appropriate service restorations.</p>


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			<p>These actions may include the following:</p> <ul style="list-style-type: none"> <li>▪ Automatic restoration of network subsystems</li> <li>▪ Rerouting of network facilities</li> <li>▪ Manual intervention by Verizon Operations and Engineering personnel as appropriate.</li> </ul> <p><b>Crisis Management</b></p> <p>Verizon has a mature, well developed crisis management organization to manage disasters anywhere they occur within Verizon’s service area. In the US, the National Emergency Coordinating Center (NECC) is the lead organization for disaster response. In a crisis situation, the purpose of the NECC is to gather, analyze, and disseminate information; develop incident action plans; engage Verizon and vendor supplied resources; and communicate/coordinate with internal and external partners. The NECC brings together representatives from all operational and support organizations across Verizon for crisis management activities.</p> <p>In a disaster, the NECC is able to reach across organizations and silos in the company quickly in order to develop and initiate plans, deploy resources, engage vendors, coordinate response, and communicate inside and outside the company. Participants are trained in the Incident Management System and NECC crisis management processes. Each emergency operations center is tested in large regional exercises at least twice annually.</p>
1.545	<p><i>The Offeror shall describe what it recommends as the evaluation criteria, along with measurements of success for all DRBCP exercises.</i></p>	Y	<p><b>Exercise Program</b></p> <p>Verizon has a very extensive and well developed disaster exercise program in place to test business continuity and disaster recovery processes. The program integrates local, regional, and national civil authorities who share mutual interdependencies during time of disaster. This coordination strengthens Verizon’s ability to respond quickly and effectively during a disaster, as relationships and coordination processes are already established with civil authorities at all levels of government.</p> <p>Verizon uses an “all-hazards” approach to its exercise program, testing the ability to respond to and recover from a wide range of natural and technological disasters, to include the following:</p> <ul style="list-style-type: none"> <li>▪ Local Disasters (impacting a single facility) – wildland fire/bush fire, aircraft crash, building fire, employee violence;</li> <li>▪ Regional Disasters (impacting multiple facilities) – hurricanes/typhoons, earthquakes, terrorism.</li> </ul>

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			<p>Exercises involve deployment of personnel and assets in response to the simulated event and identification of internal resources and vendor-provided assets in the recovery—generally more severe and complex that might be experienced during a real event.</p> <p><b>Exercise Process</b></p> <p>Verizon conducts its exercises according to a well defined exercise process based on business continuity industry best practices. An exercise planning team defines exercise scope, objectives, measurable results, and builds the exercise scenario. Exercise materials and adjuncts are produced by the exercise planning team. All exercise materials are sent through a thorough peer-review process prior to the exercise.</p> <p>On the day of the exercise, the exercise plan is carried out and facilitated by the planning team. Independent and objective observers, not previously involved in the planning process, are incorporated as evaluators of the exercise. Participants are fed information in “real time” during the exercise and must respond to the scenario, exercise materials, and adjuncts as they are presented. Immediately following the exercise, a “hot wash” of exercise successes and opportunities is conducted to capture participants’ feedback on the exercise.</p> <p>In the days following the exercise, the exercise planning team conducts a thorough post-mortem. Exercise participants are given the opportunity to provide more carefully considered feedback. Objectives and measurable results are evaluated against the exercise plan. Improvements and mitigation opportunities are identified and documented in a formal exercise review document. The finished exercise review document is presented to executive management for action and published on Verizon’s internal network.</p>
1.546	<p>The Offeror shall identify the resources that will be available and committed to Commonwealth in the event of a disaster, including staffing, point of contact, equipment. The Offeror shall include resource planning in the DRBCP.</p>	Y	

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1.547	The Offeror shall meet one day, annually for a DRBCP planning activity with Commonwealth to review risks, threats, and plans.	Y	
1.548	The Offeror shall exercise the DRBCP, at minimum annually. The scheduled exercise shall be coordinated with the Commonwealth to minimize the impact on business operations.	Y	
1.549	<i>The Offeror shall describe how and when your emergency plan will be tested, and if the plan will be tested by a third-party.</i>	Y	Verizon has extensive experience developing and implementing disaster exercise programs for testing and enhancement of business continuity plans and processes. Verizon uses a mix of table top and functional exercises to test response and recovery capabilities. Exercises are developed by an exercise team involving exercise participants and skilled emergency management personnel from the BCEM group using prescribed tools and templates. Exercises are conducted internally at least annually and are scenario based, often relying on simulations of real-world events as the foundation for development of the exercise content (e.g., bombings, pandemic influenza, etc.). Verizon tests both technology recovery as well as crisis leadership—ensuring good decision making under pressure, effective resource management, and communication with internal teams and external organizations.
1.550	The Offeror shall provide the Commonwealth the ability to observe and/or participate in the DRBCP exercise.	Y	
1.551	The Offeror shall document and provide the DRBCP exercise results to the Commonwealth with identified deficiencies and associated remediation plans.	Y	

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1.552	The Offeror shall update its DRBCP on an annual basis.	Y	
1.553	The Offeror shall share its DRBCP with authorized Commonwealth personnel.	Y	
1.554	<p><i>The Offeror shall describe its emergency response continuity of operations plan. Attach a copy of the plan, or at a minimum, summarize how the plan addresses the following aspects of pandemic preparedness: employee training (describe the Offeror's training plan, and how frequently the plan will be shared with employees), identified essential business functions and key employees (within the Offeror's organization) necessary to carry them out.</i></p>	Y	<p>Verizon has developed a Global Influenza Pandemic Plan ("GIPP"), which encompasses both preventative and response strategies in the pandemic context. The objectives of the plan are as follows:</p> <ul style="list-style-type: none"> <li>▪ To provide direction and instruction to staff to ensure minimal impact to operational activities before and during an influenza pandemic.</li> <li>▪ To define roles and responsibilities for key persons during an influenza pandemic.</li> <li>▪ To provide assurance to our customers that Verizon has a robust influenza contingency plan in place that will ensure minimal interruption to service.</li> <li>▪ To minimize the likelihood of staff contracting or spreading the influenza virus within the work environment.</li> <li>▪ To ensure staff are communicated to on a regular basis regarding information on influenza pandemic progress.</li> <li>▪ To ensure that Verizon responds to the influenza spread in line with relevant health and government agencies' recommendations, advice and directions for that location, region or country.</li> </ul> <p>The GIPP acknowledges the likelihood of increased absenteeism in the later stages of the pandemic cycle, which can stem from quarantine requirements, worker infection, care for infected family members, or because of child care in the wake of school closings. As noted in the above list of objectives, the Verizon Global Influenza Pandemic Plan is designed to minimize service interruptions.</p> <p>For additional information, see 'Verizon Global Pandemic Planning' document, below:</p> <div style="text-align: center;">  <p>Global Pandemic Planning</p> </div>

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			Additionally, Verizon's dedication to being ready to rapidly respond to such events is embodied in its culture. As part of that dedication, Verizon periodically tests its emergency response policies and procedures in order to raise employee awareness, ensure effective coordination between organizations, identify opportunities for risk reduction, and improve processes and procedures.
1.555	<i>The Offeror shall describe how your organization will communicate with staff and suppliers when primary communications systems are overloaded or otherwise fail, including key contacts, chain of communications (including suppliers), etc.</i>	Y	Appropriate customer service and public relations contacts are immediately notified of any major incident affecting Verizon and its customers. In the event of a major incident affecting Verizon customers, the network or a facility, Verizon would coordinate closely with Local, State, and Federal emergency services personnel to communicate appropriate information. Coordination occurs through a variety of channels including, but not limited to, toll free customer service lines, public Web sites, customer account teams, and the media, as appropriate. Verizon also works with the National Coordination Center (NCC) in the event Federal facilities or services are affected, or in the event a Federal response is needed.  To support and communicate with Verizon's external partners, customer account teams are also engaged as part of the regular crisis management process, so Verizon customers have regular access to current incident information. Verizon continues its customer communication throughout each crisis situation to the close of the event.
1.556	The DRBCP shall cover any type of disaster and have a maximum recovery time of 72 hours for basic services.	Y	
1.557	The DRBCP shall cover any type of disaster and have a maximum recovery time of 96 hours for business as usual.	Y	
1.558	The Offeror shall provide an operational backup NOC which shall be located within the United States, with a minimum separation of 50 miles from the primary NOC.	Y	

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1.559	<p><i>The Offeror shall describe how redundancy and disaster recovery are addressed in the overall network and security architecture.</i></p>	Y	<p><b>Network Design</b></p> <p>Verizon has invested substantial time and expense in building a highly reliable, self-healing network to ensure excellent telecommunications service with a minimum of interruption for its customers. Verizon is constantly upgrading the network to improve its performance and reliability, and has a number of systems and procedures in place to respond to network issues.</p> <p>The Commonwealth can receive fast, reliable telecommunication service over Verizon local city networks. Verizon utilizes SONET (Synchronous Optical Network) technology - an industry standard for high-speed transmission over optical fiber - to construct our networks. Verizon selected SONET ring construction because of its self-healing architecture and ability to transport ultra-high speed digital signals with differing capacities, such as voice, data, and video telecommunications.</p> <p>Self-healing fiber rings minimize the risk of outage by utilizing a circular configuration. Two paths are available at all times - if an outage is detected anywhere along the ring, traffic is automatically routed in the other direction. Self-healing fiber rings can re-route traffic almost instantly - in most cases you do not even realize that a cut has occurred. This provides the Commonwealth with the highest reliability offered by any telecommunications company today.</p> <p><b>Network Technology</b></p> <p>Verizon uses a wide array of technology, systems, and platforms to support its customers. Each individual technology in use has its own specific strategy for ensuring availability. Where business models and customer requirements dictate, Verizon incorporates “real-time” restoration capabilities into applications and networks that are considered mission critical.</p> <p><b>Network Restoration</b></p> <p>Verizon’s outbound and inbound network services, when disrupted, are restored through a combination of automatic and manually invoked processes. Specific redundancy and backup are inherent to many of the transmission hardware systems (such as fiber optic electronics) employed by Verizon today. However, for service affecting conditions, such as major network outages, it is Verizon’s policy to rapidly assess each situation in terms of the specific causal factors, and react accordingly to effect appropriate service restorations.</p>

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			<p>These actions may include the following:</p> <ul style="list-style-type: none"> <li>▪ Automatic restoration of network subsystems</li> <li>▪ Rerouting of network facilities</li> <li>▪ Manual intervention by Verizon Operations and Engineering personnel as appropriate.</li> </ul> <p><b>Crisis Management</b></p> <p>Verizon has a mature, well developed crisis management organization to manage disasters anywhere they occur within Verizon’s service area. In the US, the National Emergency Coordinating Center (NECC) is the lead organization for disaster response. In a crisis situation, the purpose of the NECC is to gather, analyze, and disseminate information; develop incident action plans; engage Verizon and vendor supplied resources; and, communicate/coordinate with internal and external partners. The NECC brings together representatives from all operational and support organizations across Verizon for crisis management activities.</p> <p>In a disaster, the NECC is able to reach across organizations and silos in the company quickly in order to develop and initiate plans, deploy resources, engage vendors, coordinate response, and communicate inside and outside the company. Participants are trained in the Incident Management System and NECC crisis management processes. Each emergency operations center is tested in large regional exercises at least twice annually.</p> <p><b>Disaster Recovery: COPANET</b></p> <p>The most significant aspect of disaster recovery in the COPANET Management solution is that the Network Operations and Control (NOC) centers are located more than 1000 miles from the State of Pennsylvania. The Primary NOC being in Texas, and the backup in California. Additionally, to quickly recover from localized, single-site disasters, the solution provides dual circuits for network management communication, with each circuit terminating at a different site and having dial-backup capabilities.</p> <p><b>Disaster Recovery: PIP</b></p> <p>Greatly enhanced disaster recovery is probably the single most important benefit of Verizon’s Private IP network. Private IP’s any-to-any structure allows it to easily re-route all data from or destined to a disaster-struck site to or from one that is running normally and in tact. Unlike ATM and frame-relay networks, in which backup permanent-virtual-circuits are required to all locations requiring connectivity during an event, Private IP remote sites can quickly and easily reconnect to backup locations when needed. This</p>

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			<p>allows applications to be available at any networked location during an event. As these application requirements change, Verizon will work with the Commonwealth to see that the required multiple redundant layers be incorporated into the network.</p> <p><b>Disaster Recovery – Internet</b></p> <p>Verizon’s solution for the Commonwealth’s Internet involves four separate connections in two diverse locations with each connection able to handle the entire bandwidth required by the Commonwealth. The Disaster Recovery is handled by this redundancy and geographical diversity. The access circuit for the Internet will be Private IP (PIP) and Verizon’s SLA for PIP would apply.</p> <p><b>Disaster Recovery – Centrex</b></p> <p>Centrex has been reliably serving clients for over 40 years. Centrex is monitored 24/ 7 from the Central Office by highly experienced engineers. If there are any hardware or network failures, it can cut over to back up systems or be replaced expediently by back up equipment that is available on-site.</p> <p><b>Disaster Recovery - VoIP</b></p> <p>The Verizon VoIP Suite of products takes full advantage of the resiliency built into the Private IP network to deliver your voice services with the highest availability. VoIP has the ability to operate with a variety of IP access methods in the event of a disaster, such as T1s, satellite, or EVDO RevA; all that is needed is access to the PIP network. In addition, the actual core VoIP nodes themselves, located in geographically diverse, state of the art data centers, ensure that regional disasters do not affect service. Local gateways, distributed throughout the network further enhance diversity and eliminate single points of failure.</p> <p><b>Disaster Recovery – NOC Managed Services</b></p> <p><b>Disaster Recovery Plans</b></p> <p>Verizon has established disaster recovery plans for each network operations center worldwide. In the event that a catastrophic situation occurs, Verizon will activate the Disaster Recovery Evacuation plan, which conducts the following:</p> <ul style="list-style-type: none"> <li>▪ Notification to management of catastrophic disaster requiring Relocation of the primary facility to the designated back up facility.</li> <li>▪ Management approves the disaster recovery evacuation decision.</li> <li>▪ Secondary NOC is notified of evacuation plans for NOC in jeopardy.</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Employees are evacuated to the designated disaster recovery center. <ul style="list-style-type: none"> <li>- 15 per shift will be dispatched; all others will be authorized to work from home or other Verizon locations.</li> </ul> </li> </ul> <p>Upon re-establishment of operations, NOC personnel from the secondary center will disengage and operations will be turned back over to the primary network operations center personnel.</p> <p><b>Disaster Recovery – Security</b></p> <p>Verizon’s Managed Security Service - OnlineGuardian more than meets this concern by offering redundancy at all three pillars of its solution architecture: end-to-end connectivity, the (unmanned) Security Management Center’s (SMCs), and the manned Security Operation Center’s (SOCs). This redundancy is always implemented in line with a customer’s policies, risk exposure, and budget.</p>
1.560	The Offeror shall specify the period of time required for the network to recover from a failure due to a disaster on the local loop; an inter-office facility; an intraLATA facility; and an interLATA facility.	Y	
1.561	<i>The Offeror shall describe how prioritization conflicts between Commonwealth and other customers of the Offeror will be resolved.</i>	Y	Overall prioritization of service restoration is governed by the Telecommunications Service Priority (“TSP”) program. As the Commonwealth has valid National Security/Emergency Preparedness (“NS/EP”) requirements, Verizon will address pandemic issues by requesting TSP treatment as directed.
1.562	The Offeror shall prioritize restoration of services as determined by Commonwealth.	Y	
1.563	The Offeror shall jointly develop with each agency a comprehensive agency business continuity plan (ABCP), for	Y	

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	network data and voice services only, upon request of the agency.		
1.564	The Offeror shall provide an incident manager in the event of a disaster that will be immediately available to the appropriate Commonwealth resources to the point of full recovery.	Y	
1.565	The Offeror must describe the methodology that will be used to test disaster recovery procedures and reporting process.	Y	
1.566	<i>The Offeror shall describe the disaster recovery solution proposed for the Public and Private Networks and any components and services in the proposed network that will not have any disaster recovery capabilities.</i>	Y	<p><b>Network Design</b></p> <p>Verizon has invested substantial time and expense in building a highly reliable, self-healing network to ensure excellent telecommunications service with a minimum of interruption for its customers. Verizon is constantly upgrading the network to improve its performance and reliability, and has a number of systems and procedures in place to respond to network issues.</p> <p>The Commonwealth can receive fast, reliable telecommunication service over Verizon local city networks. Verizon utilizes SONET (Synchronous Optical Network) technology - an industry standard for high-speed transmission over optical fiber - to construct our networks. Verizon selected SONET ring construction because of its self-healing architecture and ability to transport ultra-high speed digital signals with differing capacities, such as voice, data, and video telecommunications.</p> <p>Self-healing fiber rings minimize the risk of outage by utilizing a circular configuration. Two paths are available at all times - if an outage is detected anywhere along the ring, traffic is automatically routed in the other direction. Self-healing fiber rings can re-route traffic almost instantly - in most cases you do not even realize that a cut has occurred. This provides the Commonwealth with the highest reliability offered by any telecommunications company today.</p>

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			<p><b>Network Technology</b></p> <p>Verizon uses a wide array of technology, systems, and platforms to support its customers. Each individual technology in use has its own specific strategy for ensuring availability. Where business models and customer requirements dictate, Verizon incorporates “real-time” restoration capabilities into applications and networks that are considered mission critical.</p> <p><b>Network Restoration</b></p> <p>Verizon’s outbound and inbound network services, when disrupted, are restored through a combination of automatic and manually invoked processes. Specific redundancy and backup are inherent to many of the transmission hardware systems (such as fiber optic electronics) employed by Verizon today. However, for service affecting conditions, such as major network outages, it is Verizon’s policy to rapidly assess each situation in terms of the specific causal factors, and react accordingly to effect appropriate service restorations. These actions may include the following:</p> <ul style="list-style-type: none"> <li>▪ Automatic restoration of network subsystems</li> <li>▪ Rerouting of network facilities</li> <li>▪ Manual intervention by Verizon Operations and Engineering personnel as appropriate.</li> </ul> <p><b>Crisis Management</b></p> <p>Verizon has a mature, well developed crisis management organization to manage disasters anywhere they occur within Verizon’s service area. In the US, the National Emergency Coordinating Center (NECC) is the lead organization for disaster response. In a crisis situation, the purpose of the NECC is to gather, analyze, and disseminate information; develop incident action plans; engage Verizon and vendor supplied resources; and, communicate/coordinate with internal and external partners. The NECC brings together representatives from all operational and support organizations across Verizon for crisis management activities.</p> <p>In a disaster, the NECC is able to reach across organizations and silos in the company quickly in order to develop and initiate plans, deploy resources, engage vendors, coordinate response, and communicate inside and outside the company. Participants are trained in the Incident Management System and NECC crisis management processes. Each emergency operations center is tested in large regional exercises at least twice annually.</p>

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			<p><b>Disaster Recovery: COPANET</b></p> <p>The most significant aspect of disaster recovery in the COPANET Management solution is that the Network Operations and Control (NOC) centers are located more than 1000 miles from the State of Pennsylvania. The Primary NOC being in Texas, and the backup in California. Additionally, to quickly recover from localized, single-site disasters, the solution provides dual circuits for network management communication, with each circuit terminating at a different site and having dial-backup capabilities.</p> <p><b>Disaster Recovery: PIP</b></p> <p>Greatly enhanced disaster recovery is probably the single most important benefit of Verizon’s Private IP network. Private IP’s any-to-any structure allows it to easily re-route all data from or destined to a disaster-struck site to or from one that is running normally and in tact. Unlike ATM and frame-relay networks, in which backup permanent-virtual-circuits are required to all locations requiring connectivity during an event, Private IP remote sites can quickly and easily reconnect to backup locations when needed. This allows applications to be available at any networked location during an event. As these application requirements change, Verizon will work with the Commonwealth to see that the required multiple redundant layers be incorporated into the network.</p> <p><b>Disaster Recovery – Internet</b></p> <p>Verizon’s solution for the Commonwealth’s Internet involves four separate connections in two diverse locations with each connection able to handle the entire bandwidth required by the Commonwealth. The Disaster Recovery is handled by this redundancy and geographical diversity. The access circuit for the Internet will be Private IP (PIP) and Verizon’s SLA for PIP would apply.</p> <p><b>Disaster Recovery – Centrex</b></p> <p>Centrex has been reliably serving clients for over 40 years. Centrex is monitored 24/ 7 from the Central Office by highly experienced engineers. If there are any hardware or network failures, it can cut over to back up systems or be replaced expediently by back up equipment that is available on-site.</p> <p><b>Disaster Recovery - VoIP</b></p> <p>The Verizon VoIP Suite of products takes full advantage of the resiliency built into the Private IP network to deliver your voice services with the highest availability. VoIP has the ability to operate with a variety of IP access methods in the event of a disaster, such</p>

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			<p>as T1s, satellite, or EVDO RevA; all that is needed is access to the PIP network. In addition, the actual core VoIP nodes themselves, located in geographically diverse, state of the art data centers, ensure that regional disasters do not affect service. Local gateways, distributed throughout the network further enhance diversity and eliminate single points of failure.</p> <p><b>Disaster Recovery – NOC Managed Services</b></p> <p><b>Disaster Recovery Plans</b></p> <p>Verizon has established disaster recovery plans for each network operations center worldwide. In the event that a catastrophic situation occurs, Verizon will activate the Disaster Recovery Evacuation plan, which conducts the following:</p> <ul style="list-style-type: none"> <li>▪ Notification to management of catastrophic disaster requiring Relocation of the primary facility to the designated back up facility.</li> <li>▪ Management approves the disaster recovery evacuation decision.</li> <li>▪ Secondary NOC is notified of evacuation plans for NOC in jeopardy.</li> <li>▪ Employees are evacuated to the designated disaster recovery center.                             <ul style="list-style-type: none"> <li>– 15 per shift will be dispatched; all others will be authorized to work from home or other Verizon locations.</li> </ul> </li> </ul> <p>Upon re-establishment of operations, NOC personnel from the secondary center will disengage and operations will be turned back over to the primary network operations center personnel.</p> <p><b>Disaster Recovery – Security</b></p> <p>Verizon’s Managed Security Service - OnlineGuardian more than meets this concern by offering redundancy at all three pillars of its solution architecture: end-to-end connectivity, the (unmanned) Security Management Center's (SMCs), and the manned Security Operation Center's (SOCs). This redundancy is always implemented in line with a customer’s policies, risk exposure, and budget.</p>
1.567	<b>SYSTEM MANAGEMENT SERVICES</b>		
1.568	The Offeror shall ensure the transfer of billing information for posting to the SAP accounting	Y	

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	system complies with established standards.		
1.569	The Offeror shall apply credit adjustments in the next billing cycle after the credit is earned. Crediting adjustments will be applied against the actual service item's SAP account code.	N	Verizon Business will issue any contractual credits (if applicable) in accordance with the terms outlined in the contract. If a billing issue results in the issuance of corrective credits or debits, Verizon Business will make every effort to resolve them in a timely manner however we cannot guarantee that it will fall on the next billing cycle.
1.570	The Commonwealth shall not be liable for any un-invoiced charges submitted by the Offeror older than 60 days.	N	Unbilled Charges: Except in cases involving fraud, the Company will invoice previously unbilled charges for service if the invoice date is no later than one hundred and eighty (180) days from the end of the monthly billing period in which the charges occurred. In cases involving fraud, the Company will invoice previously unbilled charges if the invoice date is no later than eighteen (18) months from the end of the monthly billing period in which the charges occurred.
1.571	The Offeror shall provide appropriate technical support staff which can support the Commonwealth's billing requirements.	Y	
1.572	The Offeror shall retain all inventory data in its original format for online access and historical purposes for the length of the contract, including renewals.	Y	
1.573	The Offeror shall provide, on request, historical trend usage/cost information for each monthly bill, and include both monthly and cumulative cost information.	Y	

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1.574	<p>The Offeror shall integrate with the Commonwealth's Telecommunications Management System (CTMS). The integrated system shall enable users to electronically enter a service order, receive confirmation, and track the order from creation through completion.</p>	Y	
1.575	<p><i>The Offeror shall describe how it will integrate with the CTMS.</i>  <i>C.7.10The Offeror shall provide web based access to the toll free system platform.</i></p>	Y	<p><b>CTMS Integration</b>                      The Verizon Business service management portals will provide like-for-like functionality to CTMS. Our service management platform acts as a web-based front-end to our product specific ordering, asset inventory, trouble ticketing, reporting and billing platforms. Verizon will integrate these back end systems through industry standard protocols, such as XML or EDI, where it is possible to automate the systems. For systems where it is not possible to automate the integration, Verizon is providing "swivel chair" resources who will manually input the relevant information between the systems.</p> <p><b>Web-Based Access to Toll Free</b>                      Verizon Customer Care Center provides a suite of web-based applications that will allow the Commonwealth to streamline business processes and control critical business functions, while having 24x7 access to a virtual communications center. It provides the Commonwealth the ability to track and customize the products that enables them to run their business effectively and efficiently.</p> <p>Toll-free Network Manager is a powerful Web-based routing tool through a secure GUI (graphical user interface) allows registered users to quickly change and implement traffic routing plans dynamically for incoming toll-free calls.</p> <p>Network Manager: This near real-time traffic management feature for allows administrators to manage features on a day to day basis or in the events of emergency:</p> <ul style="list-style-type: none"> <li>▪ Review, add, change or delete routing plans</li> <li>▪ Define and implement alternate routing plans for disaster recovery</li> <li>▪ Track and manage routing plan orders</li> </ul>

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			<p>Traffic Reporting; renders comprehensive traffic summary information, giving the Commonwealth very important information about calls placed to its toll-free numbers and terminations.</p> <p>Customer Center Traffic Reporting and Traffic Monitor applications will help the Commonwealth to better monitor, analyze, and control their telecommunications resources. Customer Center (CC) applications provide a range of flexible network management components that can fit together to suit the Commonwealth's particular needs. These tools help control costs and improve productivity by empowering the Commonwealth to:</p> <ul style="list-style-type: none"> <li>▪ Route telecommunications traffic more intelligently</li> <li>▪ Offer the information necessary to configure their networks to suit changing business needs</li> <li>▪ View near real-time toll-free traffic on their own network</li> <li>▪ Access a centralized message center for reporting across all products and services</li> </ul> <p>Traffic Monitor allows users monitor toll-free traffic activity in near real-time. It pinpoints critical information faster than ever before, allowing a user to make quick decisions to support on-net voice Inbound (toll-free) services. Traffic Monitor also provides the ability to create personalized profile(s) by choosing individual toll-free numbers or groups of toll-free numbers, and define unique polling (time) intervals. These intervals can be as short as one minute; users may choose to configure longer intervals. The interval chosen determines the frequency with which the data is updated on the workstation.</p> <p>Traffic Monitor will also allow the Commonwealth to view summary information on toll-free numbers within minutes, as well as the call detail. The data displayed with Traffic Monitor can be for one toll-free number or for multiple toll-free numbers and includes the following:</p> <ul style="list-style-type: none"> <li>▪ Total attempts</li> <li>▪ Completed calls</li> <li>▪ Incomplete calls, including reasons why calls were incomplete</li> <li>▪ Blocked calls, including reasons why calls were blocked</li> <li>▪ Overflow calls</li> </ul> <p>Additionally, the Commonwealth can view individual call detail, including the caller's number (Automatic Number Identification or ANI), date, time, duration, termination location, Detailed Number Identification Service (DNIS) value, and disposition (i.e., Busy and Ring/No Answer).</p>

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1.576	<p><i>The Offeror shall describe the web based features and functionality available to the Commonwealth as it relates to the toll free system platform.</i></p>	Y	<p>Verizon Toll Free features and functions are the backbone of the Network Manager application, enabling the Commonwealth to direct and manage inbound calls to suit their specific business needs.</p> <p>Verizon Toll Free provides a variety of techniques to provide the Commonwealth with five types of toll free traffic management for their call routing:</p> <ul style="list-style-type: none"> <li>▪ <b>Load Balancing</b> The ability to fine-tune an active routing plan and reallocate traffic across different terminating sites. It is frequently desirable for incoming calls to be distributed evenly among all call centers. An even load balance efficiently uses call servicing agents and facilities while providing a consistent grade of service to the callers.</li> <li>▪ <b>Contingency Planning</b> The ability to design alternate routing plans to compensate for predictable, temporary traffic patterns. Location characteristics can pre-determine whether or not a particular calling center may have seasonal anomalies. Alternate plans made in advance of temporary situations can be utilized to influence the choice of the calling center best suited to handle the inbound traffic.</li> <li>▪ <b>Disaster Recovery</b> The ability to quickly implement alternate routing plans during emergency situations. Earthquakes, tornadoes, hurricanes, fires, power outages, and even bomb threats can expose the telecommunications side of business to financial loss if not handled promptly. Calls that go unanswered usually get diverted to competitors who are more than willing to handle the overflow of customers.</li> <li>▪ <b>Routing</b> In some cases, it is desirable for particular call centers to handle calls originating from specific geographic areas. Typically, this method is employed to control call transport costs or to support pre-defined sales or service territories.</li> <li>▪ <b>Inbound Call Blocking</b> In certain circumstances, the Commonwealth Toll Free customers may wish to block calls from specific geographic areas altogether. This can be done at the state, area code, or exchange level.</li> </ul> <p><b>Advanced Features</b></p> <ul style="list-style-type: none"> <li>▪ Origination features allows the Commonwealth to direct incoming traffic to the appropriate location based upon the call's origin. This can decrease the amount of time callers wait to reach the appropriate call center agent, and cut call duration and time wasted by manual direction of traffic.</li> <li>▪ Verizon's basic toll free service includes the 48 continental United States, Hawaii, Alaska, Puerto Rico, Guam, Saipan, and U.S. Virgin Islands. Extended Call Coverage utilizes the same toll free number and existing termination(s).</li> </ul>

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			<p><b>Point of Call Routing State Routing/NPA/NXX Routing</b></p> <p>With Point of Call Routing, the Commonwealth can control which call center will receive calls based upon originating NPA or state (including areas served by extended call coverage). the Commonwealth can also establish Originating Routing Groups (ORGs) and designates a specific answering location for each ORG's calls. This feature is generally useful when multiple locations are used to simultaneously terminate calls directed to a single toll free number.</p> <p><b>Area Code Routing/NPA Routing</b></p> <p>Area Code routing is the Classic origination feature that allows the Commonwealth to route inbound toll free calls based on the three-digit North American area code from which a call is placed. Using Area Code routing, the Commonwealth can, for example, tailor routing plans to selectively block inbound toll free calls from area codes that do not fall within their service area. This feature is equivalent to Numbering Plan Area (NPA) routing in node-based plans.</p> <p><b>Exchange Routing</b></p> <p>Exchange Routing takes Point of Call Routing an extra step by allowing the Commonwealth to route calls not only by the area code and state, but also by the exchange of the originating call. The call originating from NPA-NXX-XXXX is routed based on the full six digits comprising the NPA-NXX. This feature allows the Commonwealth to provide even more customization to call disposition by differentiating calls originating from within the same area code.</p> <p><b>State Routing (STA)</b></p> <p>State routing allows the Commonwealth to route inbound toll free calls based on the state from which a call is placed.</p> <p><b>LATA Routing (Local Access and Transport Area)</b></p> <p>LATA routing allows the Commonwealth to route inbound toll free calls based on the Local Access and Transport Area (LATA) from which a call is placed. You can, for example, use LATA routing to tailor routing plans to reroute inbound toll free calls originating from and terminating in areas serviced by your Local Exchange Carrier (LEC).</p>

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			<p><b>Origination Line Type (OLT)</b>                      Origination Line Type (OLT) routing allows the Commonwealth to route inbound toll free calls based on the type of phone line from which a call is placed. You can, for example, use OLT routing to tailor routing plans to selectively block calls placed from pay phones or prisons.</p> <p><b>Cross Corp ID Routing</b>                      Cross Corporate ID Routing allows the Commonwealth to route inbound calls to any answering location, helping the Commonwealth to utilize their facilities ore efficiently. The location need not share the same Corporate ID as the 800 number. (A Corporate ID is an identifier that links toll free numbers and service locations (terminations) together in Verizon's internal systems.)</p> <p><b>Tailored Call Coverage</b>                      This feature allows the Commonwealth to block incoming calls from specific origination areas. It is defined by:</p> <ul style="list-style-type: none"> <li>▪ Area Code or NPA</li> <li>▪ NPA/NXX</li> </ul> <p>Unlike banding features, Verizon Tailored Call Coverage allows customers to designate the areas from which they wish to receive calls down to the NPA/NXX level. Tailored Call Coverage can be used regardless of the number of customer locations. This service can be used in conjunction with the following routing options, which are explained in the following section entitled "Routing Features."</p> <ul style="list-style-type: none"> <li>▪ Time Interval Routing</li> <li>▪ Day of Week Routing</li> <li>▪ Holiday Routing</li> <li>▪ Percent Allocation Routing</li> <li>▪ Alternate Routing</li> </ul> <p><b>Routing Features</b>                      Verizon Toll Free Service Routing Features allows the Commonwealth to direct incoming traffic in ways that most effectively utilize their answering resources. the Commonwealth may select from any of the various options listed below to find one that meets their needs and schedules.</p> <ul style="list-style-type: none"> <li>▪ Time Interval Routing\Time of Day (TOD)</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Day of Week Routing (DOW)</li> <li>▪ Holiday or Day of Year/Month Routing (DOM/DOY)</li> <li>▪ Percent Allocation Routing</li> <li>▪ Alternate Routing</li> </ul> <p><b>Super Routing Plans (SRP)</b></p> <p>Super Routing Plans (SRP) provides the Commonwealth the ability to create single routing plans for multiple Toll Free numbers. This sophisticated capability is invaluable if you have several inbound customer service or sales centers and many Toll Free numbers that use identical routing features. the Commonwealth is limited to 99 SRPs per Corporate ID, but there is no limit to the number of Toll Free numbers assigned to an individual SRP.</p> <p><b>Sets</b></p> <p>Sets allow the Commonwealth to group Toll Free numbers logically for administrative purposes. the Commonwealth can, for example, group Toll Free numbers by department or by user. Alternate Routing Plans (ARPs) can be defined for each Toll Free number within a set; up to 99 Alternate Routing Plans can be defined for each 800 number within each set. 999 sets are allowed per corporate ID, but there is no limit to the number of Toll Free numbers in a Set.</p> <p><b>Enhanced Voice Service (EVS)</b></p> <p>EVS refers to toll free numbers that provide inbound toll free callers with pre-recorded information and menu routing options. Network Manager can be used with the Enhanced Voice Service (EVS) product line which provides automated voice response, voice processing, and call routing for the Commonwealth pursuing better and efficient ways to talk with their customers and employees. An EVS Plan is a routing plan associated with an EVS-enabled toll free number that provides inbound toll free callers with pre-recorded information and menu routing options.</p> <p><b>Calling Line Identifier (CLI)</b></p> <p>CLI allows you to route inbound toll free calls based on an originating telephone number. You can, for example, use CLI to tailor routing plans to accommodate special customer arrangements with specific clients.</p>

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			<p><b>Calling Line Identifier Range (CLR)</b></p> <p>CLR allows you to route inbound toll free calls based on an originating telephone number falling within a specific range of telephone numbers. the Commonwealth can, for example, use CLR to tailor routing plans to accommodate special customer arrangements with large organizations that have consecutively sequenced telephone numbers.</p> <p><b>Termination Features</b></p> <p>Toll Free Service Termination Features allow the Commonwealth to direct incoming traffic to specific terminating locations. By utilizing these features, users are able to effectively allocate answering resources. the Commonwealth may select from any of the various options listed in below to find one that meets their business needs.</p> <p><b>Termination (TRM)</b></p> <p>TRM allows you to select a destination to which inbound toll free calls are routed. Possible TRM types are Direct Access Line (DAL), EVS (Enhanced Voice Services) and Switched (terminates calls to a 10-digit number, also called a POTS line).</p> <p><b>Treatment (TRT)</b></p> <p>TRT allows you to block inbound toll free calls based on specific criteria, routing them to a recording, an audible signal, or an attendant. the Commonwealth can, for example, use TRT routing to block calls from pay phones or based on the originating geographic region.</p> <p><b>Trigger Points</b></p> <p>A trigger point is a flag within a routing plan that instructs the Data Access Points (DAP) on the Verizon network to go to an external source for routing instructions. Trigger points allow you to reroute or block inbound toll free calls based on additional routing instructions in the Commonwealth's call center applications. the Commonwealth can, for example, use TGP routing to tailor routing plans to accommodate customers with premium service, block calls from competitors, or route calls based upon caller-entered digits.</p> <p><b>Destination Labels</b></p> <p>Destination labels work together with Trigger Points. Once a trigger point has caused the DAP to go to an external source for routing instructions, the result back from the external customer can be a Destination Label, which returns the call for further routing.</p>

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			<p><b>Dialed Number Identification Service (DNIS)</b></p> <p>DNIS is used extensively by telemarketing centers that answer calls for multiple Toll Free numbers. It can also be used to identify origination point of calls to one Toll Free number. DNIS identifies multiple Toll Free numbers coming into the same location by outpulsing the digits received (between 1 and 10 digits) to the customer premise equipment. The Verizon network can outpulse between 1- and 10-digits. This feature is available to customers with dedicated terminations and equipment configured to process DNIS digits.</p> <p><b>Enhanced DNIS (EDNIS)</b></p> <p>Enhanced DNIS allows alternate digits to be assigned to the DNIS value that will outpulse from the Verizon network for delivery to the customer equipment. One or more logical terminations under the service number using DNIS may have an alternate set of digits assigned. When Alternate Plans or Super Routing Plans are invoked, the Enhanced DNIS will assist the customer in identifying the 800 number that was dialed.</p> <p><b>Network Call Redirect (NCR)</b></p> <p>NCR, also referred to as call overflow, can help you reduce caller frustration and potential lost orders during heavy traffic hours by controlling inbound call congestion. NCR is an advanced feature that redirects calls to other pre-defined alternate location(s) during outages, busy conditions, or when agents are not present to handle calls. Alternate destinations may consist of a network announcement, followed by reallocation of calls to one of the customer's other domestic or international locations. An NCR user can choose why, where and how to overflow calls based on Trunk Group, Type of Service (both inbound and outbound) or individual Toll Free/Vnet number.</p> <p><b>Classic Netcap Vs Netcap Nodes</b></p> <p>There are currently two versions of Netcap architecture running in our network. "Classic Netcap" is the version that has been in existence for many years. In addition to the Classic Feature version, Network Manager now incorporates a node structure, Netcap Nodes, which offers greater flexibility in managing, provisioning and routing of toll free numbers. Users are able to manipulate many more features with Netcap Nodes for Network Manager.</p>



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1.577	The Offeror shall provide web based access to the VOIP and/or IP telephony platform.	Y	
1.578	<i>The Offeror shall describe the web based features and functionality available to the Commonwealth as it relates to the VOIP and/or IP telephony platform.</i>	Y	<p>The following describes the web based features and functionality available to the Commonwealth with Verizon VoIP solution:</p> <p><b>Communication Manager</b></p> <p>The following features are included with the Communication Manager:</p> <ul style="list-style-type: none"> <li>▪ Click-to-Dial Enables subscriber to input and dial a number, dial directly from a drop-down Phone List (Personal, location directory or Call Log) or Outlook tab, or click the Redial button.</li> <li>▪ Talk Enables subscriber, who is already engaged in call, to answer another waiting call. When available, Calling Line ID is displayed with caller's name (if available Dependent on names in the contact list and on-net status) and number.</li> <li>▪ Call Hold/Retrieve Enables subscriber to place an existing call on hold for an extended period of time, and then retrieve the call to resume conversation. While the calling party is held, the subscriber may choose to make a consultation call to another party.</li> <li>▪ Call Transfer Enables subscriber to redirect a ringing, active, or held call to another number or directly to voicemail. Before transferring the caller, the subscriber may choose to consult with the third party first or establish a three-way consultation.</li> <li>▪ Conference Enables subscriber to establish a three-way call involving two other parties.</li> <li>▪ Hang up Call Enables subscriber to disconnect a call that has been answered.</li> <li>▪ Configure Services Buttons are provided to enable subscriber to turn on/off frequently used services such as Call Forwarding Always and Do Not Disturb. Provides a web-based tool for Subscribers to invoke their services, as an alternative to using feature codes or depressing the flash hook.</li> </ul> <p><b>Communication Manager Express</b></p> <p>Enables users to pre-configure multiple profiles for managing incoming calls differently based on the subscriber's status:</p> <ul style="list-style-type: none"> <li>▪ Available In the Office</li> <li>▪ Available Out of the Office</li> <li>▪ Busy</li> <li>▪ Unavailable</li> </ul>

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			<p>Each profile includes preferences for managing the relevant incoming call functions (e.g., Call Forwarding (busy, no answer, always, selective), Simultaneous Ringing, Call Notify), which can be configured through a single easy-to-use web page or via the telephony user interface. Enables users to more quickly and easily change the way they receive their incoming calls. In conjunction with the telephony user interface, it provides a power solution for mobile users.</p> <p><b>Remote Office</b></p> <ul style="list-style-type: none"> <li>▪ Enables subscribers to access and use their VoIP service from any end point, on-net or off-net (e.g., home office, mobile phone).</li> </ul> <p>This service is especially useful for tele-workers and mobile workers, as it enables them to use all of their Communication Manager features while working remotely (e.g., extension dialing, transfers, conference calls, Outlook Integration, directories, etc.). In addition, since calls are still originated from VoIP, the service provides an easy mechanism for separating personal and business phone expenses, as well as keeping alternate phone numbers private. This service must be set-up by the administrator.</p> <p><b>Network Features for Administrators</b></p> <p><b>Account Codes</b></p> <p>Enables the tracking of calls made outside of the location by prompting subscribers for an account code. With this service, codes are not validated (see Authorization Codes). Administrators manage their account codes via their Verizon Enterprise Center Location Dashboard web portal. Ability to manage costs and to generate revenue by providing the tools to bill back charges to clients.</p> <p><b>Administrator Web Dashboard</b></p> <p>Web portal that empowers a business administrator to provision services for subscribers, a location, or the entire enterprise.</p> <p>Allows administrator easy access to configure, manage and monitor features and settings.</p> <p><b>Attendant Console</b></p> <p>The web-based Attendant Console enables a subscriber (e.g., receptionist) to monitor a configurable set of subscribers. All must be built under the same location as the Attendant. The Attendant Console graphically displays subscribers status (busy, idle, do not disturb), as well as detailed call information. The Attendant Console window is</p>

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			<p>integrated with the Communication Manager, thereby enabling the attendant to perform functions such as click-to-transfer or click-to-dial. View Call Information Option to view duration of monitored subscribers calls and name and number of parties that they are talking to. Receptionist can view detailed subscriber information and current status at a glance. Attendant Console can be quickly assigned to specific Subscribers with limited disruption and can scale to support multiple subscribers at a location. Attendant Console is always up to date with the most current list of Subscribers and extensions built under the location.</p> <p><b>Authorization Codes</b></p> <p>Prompts subscribers for an authorization code when making calls outside of the location. Calls will not be connected unless a valid code is entered. Administrators manage their authorization codes via their Verizon Enterprise Center Enterprise Dashboard web portal. A subscriber can not have this service and the Account Codes service enabled at the same time. Ability to manage costs by limiting calling capabilities to subscribers with specifically-assigned access.</p> <p><b>Auto Attendant</b></p> <p>The Auto Attendant serves as an automated receptionist that answers the phone and provides a personalized message to callers with options for connecting to the operator, dialing by name or extension, or connecting to up to six configurable extensions (e.g., 1 = Marketing, 2 = Sales, etc.). Configuration via the Verizon Customer Center Administrator Dashboard web interface also allows for hours of operation to be modified, with different options available for hours that the company is open or closed.</p> <p>Each VoIP location can have its own Auto Attendant and using the transfer function, Auto Attendants can be nested together creating a seamless nationwide Auto Attendant. (e.g., enterprises main Auto Attendant is configured to seamlessly route to the Auto Attendant of a particular department or location). The administrator can fully configure the Auto Attendant through any web browser in a few clicks of the mouse. Auto Attendant supports one-key dialing and operator dialing as well as name and extension dialing for subscribers at a location. Each is fully configurable by the location or administrator. Auto Attendant is always up to date with the subscribers for the associated location. Auto Attendant features an embedded night service profile that is automatically activated outside of business hours.</p>

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			<p><b>Auto Attendant – Enhanced Business Hours</b></p> <p>The Auto Attendant can be set with multiple time ranges for example (9 a.m. - 11 a.m. and 1 p.m. - 2 p.m.) and support different hours on different days. This flexibility gives customers the added flexibility to treat calls via their Auto Attendant differently for different times of the day as well as days of the week.</p> <p><b>Auto Attendant – Holiday Schedule</b></p> <p>An administrator can create an unlimited number of holiday schedules for their Auto Attendant. Up to a maximum of 20 dates or date ranges can be entered per schedule. This flexibility prevents administrators from having to manually enter dates for every holiday.</p> <p><b>Call Blast – Hunt Group</b></p> <p>Enables all of the phones in a hunt group to ring simultaneously when calls are received on a virtual number. The first phone to be answered is connected. This function is a routing capability of the Hunt Group feature. Hunt Groups can receive incoming calls at all possible locations and without having to set up routing to different devices.</p> <p><b>Call Intercept</b></p> <p>Enables administrators to intercept calls routed to a non-working internal line with informative announcements and alternate routing options.</p> <p>Administrators can use a default intercept message that says, "The number you are trying to reach is out of service." If they prefer, administrators can opt to add language that says callers can press "0" to speak with an operator or they can provide callers with the new telephone number.</p> <p>If they prefer, the message can be customized by the administrator. The service may be assigned to an individual subscriber's phone number (e.g., when they have left the company) or it can be assigned to all subscribers at a location.</p> <p>Administrators can ensure that calls coming into non-working lines are not lost.</p> <p><b>Calling Location ID Delivery</b></p> <p>Provides the name and number of the location (or company) for outgoing calls from subscribers in the location, rather than providing the subscribers own name and number. The location number may be defined on a per subscriber basis. Gives call recipient location-level information.</p>

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			<p><b>Calling Line ID Configuration</b></p> <p>Enables the administrator to configure each of the displayed subscriber calling numbers. This information is visible to subscribers in their profiles as read-only. Administrators can manage the appearance of all calling line IDs.</p> <p><b>Calling Plan – Incoming</b></p> <p>The Incoming Calling Plan is configured via the Verizon Enterprise Center Location Dashboard web interface. In addition to being able to configure which types of calls each subscriber is restricted from receiving (e.g., intra-location), administrators may regulate incoming calling by restricting specific digit patterns. This is done with the Digit String feature in the administrator web portal.</p> <p>The Incoming Calling Plan also enables administrators to reject the following types of incoming calls:</p> <ul style="list-style-type: none"> <li>▪ Collect calls</li> <li>▪ Calls from within the location</li> <li>▪ Calls from outside the location</li> </ul> <p>Enables administrators to block specified incoming calls to their company and/or individual subscribers. For example, some subscribers may be prevented from receiving calls from outside the company. For example, subscribers may be prevented from receiving calls from a competitor's number or a particular area code or country code.</p> <p><b>Calling Plan – Outgoing</b></p> <p>The Outgoing Calling Plan is configured via the Verizon Enterprise Center Administrator Dashboard web interface. In addition to being able to configure which types of calls each subscriber is restricted from making, administrators may regulate outgoing calling by restricting specific digit patterns. This is done with the Digit String feature in Administrator web portal.</p> <p>If a profile has not been configured for a particular subscriber, the default set of outgoing call privileges for the location is applied. Use of the Custom Check Box allows that subscriber to have separate call settings which can override the location level restrictions.</p> <p>Enables administrators to block subscribers from making certain types of outgoing calls, such as long distance, toll, or premium numbers. For example, subscribers may be prevented from calling a competitors number or a particular area code or country code.</p>

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			<p><b>Calling Plan – Outgoing – Enhanced</b></p> <p>In addition to blocking or allowing given call types and digit strings, administrators have the following options for configuring the outgoing calling profile of their location and individual subscribers:</p> <p>Authorization Codes Selected subscribers can be prompted for an authorization code to allow specified call types or digit strings. Administrators can pre-configure one or multiple authorization codes to be entered by subscribers. Use of this feature within the Enhanced Outgoing Calling Plan takes precedence over the standalone Authorization Code service.</p> <p>Call Transfer Specified outgoing call types and digit strings can be automatically transferred to one of up to three transfer destinations that Administrators can pre-configure. For example, international calls made from a conference room may be transferred to a company operator who will validate the Subscribers identity and their purpose for making an international call.</p> <p>Existing configurations are retained when the Enhanced Outgoing Calling plan is assigned to replace the basic version of the service.</p> <p>Provides Subscribers with the option to enter a Sustained Authorization Code to unlock calling from their phone. When the feature is enabled, subscribers will not be prompted for an authorization code every time they make a call that requires an authorization code, as defined by the Enhanced Operations Channel (EOCP). Separate feature access codes are used to turn this feature on and off. Note: Custom Subscriber must be selected in the Dashboard.</p> <p>The Enhanced Calling Plan provides administrators with even greater degree of control over outgoing calls made from within their location.</p> <p>Administrators can choose from different types of call restrictions including:</p> <ul style="list-style-type: none"> <li>▪ Location Calls from within the subscriber's location.</li> <li>▪ Local Calls within the same geographic region.</li> <li>▪ Toll Free Free calls to numbers beginning with 1, usually followed by 800, 877, or 888.</li> <li>▪ Toll Chargeable calls within the same geographic region.</li> <li>▪ International Chargeable calls to other countries.</li> <li>▪ Operator Assisted Calls made with the chargeable assistance of an operator.</li> <li>▪ Chargeable Directory Assistance Chargeable calls made to Directory Assistance such as 411 or 555-1212.</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Special Services I Calls to 700 numbers. These calls may or may not be chargeable.</li> <li>▪ Special Services II (Reserved for system administrators discretion.)</li> <li>▪ URL Dialing Calls made to URLs, which are outside of the location (for example, to an e-mail address outside of the location).</li> </ul> <p><b>Calling Plan – Forwarded/Transferred</b></p> <p>Enables administrators to prevent specified subscribers from forwarding or transferring calls to certain types of numbers, such as long distance, toll, or premium numbers. Calling plans are configured via the Verizon Enterprise Center Administrator Dashboard web interface. If a profile has not been configured for a particular subscriber, the default set of incoming call privileges for the location is applied.</p> <p>Enables administrators to prevent fraudulent calling, such as company employees calling their office number at night or on the weekend to make personal calls to international destinations.</p> <p><b>Configurable Extension Dialing</b></p> <p>The extensions can be of any length (2 to 6 digits) as defined by the administrator and dialed via the Administrator Web Interface or by phone. All extensions within a location must be of the same length. Provides the ability to map directory numbers (DNs) within a location to unique extensions.</p> <p><b>Configurable Feature Codes</b></p> <p>Provides each location administrator with the option to specify the feature codes (a.k.a., star codes) associated with their services (e.g., Last Number Redial, Call Return) via the Verizon Enterprise Center Administrator Dashboard web portal. Subscribers can see, but not edit, the star code associated with each service at any time by referencing their Verizon Enterprise Center Personal Dashboard web portal. Enables Administrators to configure two different feature access codes for the same service. For example, *69 and #81 could both be used to enable Call Return. Enables Administrators to control feature code commands.</p> <p><b>Configurable Feature Code Prefix</b></p> <p>Enables the administrator to define up to two different prefixes to precede their feature codes. Each prefix may include 1-2 characters, with the default being a single star (*). Enables administrators to control feature code commands.</p>

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			<p><b>Configurable Time Zones</b></p> <p>A default time zone is specified for each location. The respective time zone is used for all services requiring date/time stamps, such as Auto Attendant and Selective Call Forwarding. Subscribers have the option of individually change their own effective time zone in cases where it differs from their locations default.</p> <p><b>Device Inventory</b></p> <p>Enables administrators to inventory their equipment including premise gateways and IP phones via their Verizon Enterprise Center Administrator Dashboard web interface. Devices may be easily added, deleted and modified. In addition, administrators can assign subscribers directly to a device and/or a port on a device. Enables administrators to more effectively manage stock.</p> <p><b>E911 Support Enhancement</b></p> <p>Enables routing of emergency calls to the correct tandem switch based on the caller's phone number. The system ignores subscriber disconnects and disallows features to be used when an emergency number (i.e., 911) is dialed. Provides 911 support in case of emergency.</p> <p><b>Hunt Groups</b></p> <p>Hunt Groups allow users to be included in a specified hunt group to handle incoming calls received by an assigned Hunt Group phone number. This is a virtual number not a specific subscriber telephone number. Administrators can choose from any of the following hunt schemes, each of which rings the specified phones in a different manner:</p> <p>Circular sends calls in a fixed order. The call is sent to the first available person on the list, beginning where the last call left off. The Circular option tries the agent after the last agent to take a call. The search continues including looping around the list until it reaches the agent it started with.</p> <p>Regular sends calls to users in the order listed by an administrator. Incoming calls go to the first available person on the list, always starting with the first person on the list.</p> <p>Call Blast all of the users in the group simultaneously; the first user to pick up the ringing phone is connected.</p> <p>With Uniform, as a call is completed, the user moves to the bottom of the call queue in a shuffling fashion. The next incoming call goes to the user who has been idle for the longest. If a user receives a call that was not directed to them through the hunt group, the call will not be included in the receiving order for Uniform calls.</p>

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			<p>No Answer Timeout enables calls that have been distributed to a phone, but not answered in a specific number of rings, to be redirected to the next available phone. If all idle phones have been visited once without answer, there are two options for handling the call: forward call to an external number, or give the call a Temporarily Unavailable treatment, which can trigger a service such as voicemail.</p> <p><b>Music on Hold</b></p> <p>Enables administrators to upload an audio file onto the system to be played to parties on hold. Provides opportunity to play music and messages to enhance customer calling experience.</p> <p><b>PS/ALI</b></p> <p>Private Switch/Automatic Location Identification (PS/ALI) is an advanced form of E-911 service. It gives customers the ability to deliver station-level Automatic Number Identification (ANI) and exact location information to the Public Safety Answering Point (PSAP).</p> <p><b>Series Completion</b></p> <p>The Series Completion service can be assigned to a selected series of lines to forward calls on a busy condition. It is a form of hunting in which the next line in the series completion group is tried in a prearranged order, without any limit on the number of sequential forwards. Unlike hunt group functionality, the lead number for a series completion is associated with a specific subscriber. The call is only forwarded if the subscriber's line is busy. If the user's line is not busy then the network will route the call according to the rules that have been configured for a "no answer" condition.</p> <p>This service is used to support Key System functionality. Key systems typically ring all available lines in a specified order for incoming calls, regardless of the number dialed to reach the company. For example, when calling a tech support hotline, the subscriber dials (800) 555-HELP. That number attempts to ring line 1 of company. If line 1 is busy, it will attempt to ring line 2. If line 2 is busy and so on. If all lines are busy, the call can be sent to or another assigned service of the series completion group. Similarly, if all lines or subscribers of this company were assigned to a Series Completion group, Verizon VoIP acts just like a key system. Supports key system functionality.</p>
1.579	The Offeror shall ensure all items and/or feature settings in the inventory agree with the	Y	

This document contains Verizon material that shall not be disclosed, duplicated, or used for any purpose other than to evaluate this proposal.

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	Offeror's switch items and/or feature settings at all times. The Offeror shall initiate audits and provide audit results to the Commonwealth.		
1.580	The Offeror shall ensure all inventory information, including any resale inventory items, must be complete and accurate at all times in the CTMS.	Y	
1.581	The Offeror shall allow for bulk uploads when the Commonwealth determines that the need exists. The Offeror shall develop an automated process to upload large amounts of data directly into the CTMS.	Y	
1.582	The Offeror shall ensure that Telephone Directory Listings are accessible via the CTMS.	Y	
1.583	<b>CTMS Support</b>		
1.584	The Offeror shall assume responsibility of the CTMS application.	Y	
1.585	The Offeror shall integrate with the CTMS. The system shall enable users to electronically enter a service order from start to finish, receive a confirmation and	Y	

This document contains Verizon material that shall not be disclosed, duplicated, or used for any purpose other than to evaluate this proposal.

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	track the order from process start to end.		
1.586	The Offeror shall ensure the CTMS is available for access by all users on a 24x7x365 basis, with the exception being scheduled maintenance approved by the CTMS Administrator.	Y	
1.587	The Offeror shall provide primary and secondary support 24x7x365 to manage and make modifications to the Commonwealth's telecommunications management system (ISS) application.	Y	
1.588	The Offeror shall provide the hardware and software platform to support the CTMS application.	Y	
1.589	The Offeror shall coordinate in advance any CTMS program changes that are necessary according to a schedule provided by the Commonwealth.	N	The Verizon portal and service management platforms support multiple customers. Verizon will notify the Commonwealth of service impacting planned outages, upgrades or changes, and our Program Management Office will work with the Commonwealth to minimize the impact upon the Commonwealth.
1.590	The Offeror shall be required to comply with the Commonwealth's SAP data interchange format.	Y	
1.591	The Offeror shall ensure the trouble ticket module within the CTMS application interfaces with the Offeror's help desk	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	ticketing system.		
1.592	The Offeror shall ensure its support team is located within the U.S.	Y	
1.593	The Offeror shall receive orders electronically from Contract Participants located in business areas throughout the State via the CTMS.	Y	
1.594	The Offeror shall meet the Service Levels described in Schedule E-1.	N	<p>Verizon read this Section as Schedule F-1.</p> <p>Verizon looks forward to discussing the SLA performance measurements upon contract award. The Verizon-proposed solution is comprised of a series of products/services components where a number of the components offer SLAs at no additional cost. Also, the core of the solution has been recognized by consultants as industry leading and has set Verizon apart from its competition. The Verizon solution has been configured to take advantage of these products such that the Commonwealth can realize the highest degree of reliability, availability, and quality.</p> <p>Verizon is prepared to represent its available product/service SLAs at the joint meeting with the Commonwealth. Additionally, at this meeting, Verizon will discuss the need for any custom SLAs required by the Commonwealth to meet its critical business needs. Verizon has assumed that all SLAs will become effective upon the completion of the Transition.</p> <p>Given Verizon's vast experience with other large customers, Verizon is confident to be able to develop mutually agreed upon performance requirements/measurements on the products/services being proposed with any applicable price increase.</p>
1.595	The Offeror shall allow an order to be changed or cancelled anytime within a time period specified by the Commonwealth prior to the scheduled completion date. This change or cancellation may come from any authorized	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	Commonwealth participant.		
1.596	The Offeror shall not change any established installation dates initiated by the Offeror without the Commonwealth's concurrence.	Y	
1.597	The Offeror shall commit to providing a facilities ready date to the Commonwealth within 5 business days of receiving the order. If facilities are not available in that service area, a commitment date to provide the service should be noted, adhered to by the Offeror, and communicated to the creator of the order.	N	For many Verizon products the Facilities Ready Date will be available within 5 business days of receiving the order. Some of the other Verizon products will require up to 10 business days after order receipt, if facilities are available. If facilities are not available, the timeframe to return a Facilities Ready Date date to the customer is situation dependent.
1.598	The Offeror shall notify the Commonwealth when scheduled date changes occur. The Offeror shall provide the Commonwealth with a reason for the scheduled date change which must be documented in the status history. The Commonwealth will work with the Offeror for agreement on an acceptable time period for the date change notification.	Y	
1.599	The Offeror shall test and verify completeness of order in accordance with agreed to	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	acceptance criteria by the Commonwealth.		
1.600	The Offeror shall ensure that orders exceeding or with the potential to exceed the requested completion date will electronically generate an exception notice to the creator of the order. Order status shall be updated accordingly.	Y	
1.601	The Offeror shall ensure it's expedite process and procedures includes provisions that allows the Commonwealth to verbally submit prior to placing a system generated request.	Y	
1.602	<i>The Offeror shall describe it's expedite process and procedures.</i>	Y	Offeror's expedite process and procedures vary with the product set being offered to customer, as do the standard intervals for network service delivery. Offeror's expedite policy is to provide best effort to improve upon standard intervals, with no guarantees as to meeting a specific escalation date.
1.603	<i>The Offeror shall describe how orders will be expedited on an emergency basis as well as if and how this process differs from the standard expedited process. Vendor must specify additional resources or capabilities that are available to address the need to install service on an emergency basis.</i>	Y	Verizon Business will work with the Commonwealth to provide emergency expedites on orders where there is a serious business risk to the Commonwealth. Verizon makes our best effort to engage all available order entry, provisioning, engineering, operations and testing resources available. Offeror's expedite processes, normal and emergency, are best effort without guaranteed delivery dates.

Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.604	<i>The Offeror shall describe cases when an expedite would not be possible. The Offeror shall describe each case and define how each case will be addressed as part of the provisioning process.</i>	Y	Expedites are not always possible for certain of Offeror's products, nor when serious facility issues are identified within Offeror's network or at a customer's location. In general, facilities issues limit Offeror's ability to expedite service delivery, regardless of product set.
1.605	<i>The Offeror shall describe its process for continued delivery of the provisioning process in the event of system failure.</i>	Y	Verizon has a dedicated account team who support the Commonwealth. In the event of a system failure, the Commonwealth would continue to submit orders directly to the account team. The account team would then work within our business as usual processes to initiate orders and facilitate provisioning of services.
1.606	<i>The Offeror shall describe its order fulfillment status that allows the Contract Participant to accept or reject an order before billing commences.</i>	Y	Development of the Acceptance Criteria to be used, on a per site/per service basis, will be agreed between the Commonwealth and Verizon.
1.607	The Offeror shall meet the Commonwealth's requirement for installation and MACs.	N	Verizon will work with the Commonwealth to define mutually agreed requirements for installation and MACs.
1.608	The Offeror shall notify the Contract Participant when the new or re-provisioned services are available.	Y	
1.609	The Offeror is responsible for meeting installation dates as established. Failure to meet an established installation date, or need for the Offeror to postpone an installation date during a Commonwealth-specified time frame for any reason other than	N	Verizon will work with the Commonwealth to define mutually agreed requirements for installation and any potential credits.

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	those excepted in the contract, will result in the Commonwealth receiving a credit equivalent to one month's service for the order being delayed.		
1.610	The Offeror shall ensure its product catalog is available from within the CTMS. All products and or services that are offered by the Offeror and/or its subcontractors must be included in this online catalog which must be updated when additional services are available. The catalog must list, at minimum, a product code, detailed description, and any associated costs. Each product and its associated features should be grouped together in the catalog in an organized manner to facilitate easy reference.	Y	
1.611	The Offeror shall provide standard monthly summary reports for service orders as required by the Commonwealth. The reports must be available in both CSV and PDF formats, depending on the specific report. The Commonwealth requires that the reports be generated in two	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
	different formats: Enterprise Wide and Contract Participant Specific. Separate reports shall be generated for each Contract Participant. Reports are to be transferred to business area designated folders on the Commonwealth FTP Server.		
1.612	The Offeror shall have the ability to provide reporting from both standard queries and adhoc queries.	Y	
1.613	The Offeror shall provide customized management reports at no additional cost.	Y	
1.614	The Offeror shall provide a complete Customer Service Report by location by Contract Participant be available for download in both CSV and PDF formats.	Y	
1.615	<i>The Offeror shall describe its available Network Management tools and how it will support the service level, help desk, and reporting requirements needed by the Commonwealth.</i>	Y	<p>The Verizon Network Management Solution will support the Commonwealth of Pennsylvania's service levels, help desk and reporting requirements. Verizon's IMPACT management platform integrates multiple off the shelf management products which allows for industry standard interfaces. The flexibility of leveraging the standard interfaces provides robust support for the Commonwealth network managers and senior team.</p> <p><b>Service Levels and Reporting Requirements</b></p> <p>The Verizon Private IP (MPLS) solution leveraging Managed Network Services provides automated support of the individual service levels. The Commonwealth agencies have the ability to subscribe to the Gold, Silver or Bronze levels supported by the IMPACT automates tool set and EMC SMARTS which manages the Commonwealth's Customer</p>

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
			<p>premise equipment. The IMPACT platform monitors the transport, backbone and customer premise equipment in order to support service levels. Verizon supports Computer Associates Concord reporting solution as a part of the reporting requirements. The Verizon solution has the ability to provide a combination of network based reports on the MPLS/PIP solution with the customer premise equipment Concord reporting solution to support all reporting requirements.</p> <p><b>Help Desk</b></p> <p>The Verizon solution with the Commonwealth will support a help desk which has the ability to provide a standards based web enabled toolset. This tool set is available to both the Commonwealth and help desk resources. The Verizon solution also has the ability to e-bond with both internal and Commonwealth based management systems. For example, if a Commonwealth agency has made the investment in an electronic ticket management system (ETMS) that investment can be leveraged to electronically bond with the Verizon solution to update tickets and communications between the participating organizations.</p>
1.616	The Offeror shall provide system training at least monthly. Training to be held at a Commonwealth location at Commonwealth discretion.	Y	
1.617	The Offeror shall provide additional training sessions based on Commonwealth need and content. Training to be held at a Commonwealth facility in the Harrisburg area.	Y	
1.618	The Offeror shall provide an annual Users Conference on existing and prospective services.	Y	
1.619	The Offeror shall be able to comply with federal E-Rate discount program.	Y	

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Ref ID	Commonwealth Requirements	Comply (Y/N)	Offeror Response
1.620	The Offeror shall provide a solution that is compatible and integrates with existing PPTN systems and station systems.	Y	

## Exhibit F-1 CTMS Inventory



Exhibit F-1 - CTMS  
Inventory[1].pdf

**REQUEST FOR PROPOSAL**



**Commonwealth of Pennsylvania  
Office of Administration / Information Technology**

**Appendix C –  
COSTARS Program Questionnaire**

RFP ISSUE DATE

November 12, 2008

PROPOSAL DUE DATE

January 20, 2009

APPENDIX C

COSTARS PROGRAM QUESTIONNAIRE

COMMONWEALTH OF PENNSYLVANIA  
Department of General Services

RFP# 6100004339

**If your firm is awarded a Contract, does it agree to sell/provide the awarded items/services at the same prices and/or discounts, and in accordance with the contractual terms and conditions, to registered COSTARS Purchasers who elect to participate in the contract?**  
**Please Answer: YES \_\_\_\_\_ NO x**

Verizon will negotiate contract pricing, for CoStars purchasers, at the time of contract award.

Verizon Business Network Services Inc. on behalf of MCI Communications Services Inc.  
d/b/a Verizon Business Services

Corporate or Legal Entity Name

Suleiman Hessami

Signature/Date 2/24/09

Suleiman Hessami, Vice President Pricing and Contract Management

Printed Name/Title



# Commonwealth of Pennsylvania

Date: **December 1, 2008**  
Subject: **Telecommunications Managed Services**  
Solicitation Number: **6100004339**  
Opening Date/Time: **January 20, 2009 at 1:00 pm EST**  
Addendum Number: **1**

---

To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals).

*List any and all changes:*

Please see attached the questions and answers, pre-proposal conference attendance list, and the following additional exhibits:

Exhibit K Updated ESF Diagram  
Exhibit L Representative PBX Listing  
Exhibit M Listing of NPA/NXX  
Exhibit N International Outbound Usage  
Exhibit O ACD Agents  
Exhibit P Residential Locations

## **For electronic solicitation responses via the SRM portal:**

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PA Department of General Services  
Kay Shaffer  
555 Walnut Street, 6th Floor  
Harrisburg, PA 17101

Except as clarified and amended by this Addendum, the terms, conditions, specifications, and instructions of the solicitation and any previous solicitation addenda, remain as originally written.



# Commonwealth of Pennsylvania

Very truly yours,

Name: Kay Shaffer  
Title: Associate Commodity Manager  
Phone: 717-346-3830  
Email: [kashaffer@state.pa.us](mailto:kashaffer@state.pa.us)





# Commonwealth of Pennsylvania

Date: **December 2, 2008**  
Subject: **Telecommunications Managed Services**  
Solicitation Number: **6100004339**  
Opening Date/Time: **January 20, 2009 at 1:00 pm EST**  
Addendum Number: **2**

---

To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals).

*List any and all changes:*

The following items have been uploaded to the PA Supplier Portal:

Supplier Pricing Forms WebEx Invitation  
Exhibits E, F-1, F-2, F-3, F-4, F-5, F-6, H, I, and J in native file format

### **For electronic solicitation responses via the SRM portal:**

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Very truly yours,

Name: Kay Shaffer  
Title: Associate Commodity Manager



# Commonwealth of Pennsylvania

Phone: 717-346-3830

Email: [kashaffer@state.pa.us](mailto:kashaffer@state.pa.us)



# Commonwealth of Pennsylvania

Date: **December 12, 2008**  
Subject: **Telecommunications Managed Services**  
Solicitation Number: **6100004339**  
Opening Date/Time: **February 17, 2009 at 1:00 pm EST**  
Addendum Number: **3**

---

To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals).

*List any and all changes:*

1. The Commonwealth is extending the opportunity for a third round of questions and answers. The third and final round of questions are due on January 5, 2009 by 5:00 pm EST. Questions should be sent to the Issuing Officer as per the RFP.
2. The Commonwealth is extending the proposal due date. Proposals are due on February 17, 2009 by 1:00 pm EST.
3. The Pricing Forms Workshop was recorded and is available for viewing at:  
<https://equaterra.webex.com/equaterra/lsr.php?AT=pb&SP=EC&rID=10915602&rKey=7F2077445B7E6F63>
4. The slide presentation from the workshop has also been made available. It has been posted to the supplier portal and is labeled "Offeror Pricing Forms Workshop".

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Very truly yours,

Name: Kay Shaffer  
Title: Associate Commodity Manager  
Phone: 717-346-3830  
Email: [kashaffer@state.pa.us](mailto:kashaffer@state.pa.us)



# Commonwealth of Pennsylvania

Date: **December 19, 2008**  
Subject: **Telecommunications Managed Services**  
Solicitation Number: **6100004339**  
Opening Date/Time: **February 17, 2009 at 1:00 pm EST**  
Addendum Number: **4**

---

To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals).

*List any and all changes:*

1. Additional round 1 questions and answers have been posted to the supplier portal. This document is labeled as "Questions and Answers Round 1 Part 2".
2. Round 2 questions and answers have been posted to the supplier portal. This document is labeled as "Questions and Answers Round 2 Part 1".
3. Revisions of Schedule F-1 Service Level Matrix and Exhibit D Service Provider Pricing Forms have been posted to the supplier portal. The following is the summary of changes to Schedule F-1:
  - 1). Removed Baseline Data and Measurement Metric columns
  - 2). Populated Service Level Type and Service Level Class
  - 3). Modified Target Level for SLA Ref#5
  - 4). Modified column heading "Service Level Class" to "Service Levels" to reflect the Schedule F Service Level Methodology and Schedule A Defined Term
  - 5). Modified Service Level to KPI for SLA Ref#6 and SLA Ref#14
  - 6). Removed original SLA Ref#19 Internet Latency
  - 7). Modified SLA Ref#16 to address specifically availability of the redundant and secure Enterprise Internet Access Network (as in Exhibit C 1.81)
  - 8). Added 5 new Enterprise Services SLA's under SLA Ref# 16 and renumbered remainder of matrix
    - Redundant and secure Enterprise Remote Access Service
    - Redundant and secure Enterprise Business Partner DMZ Service
    - Enterprise COPANET Management Service
    - Redundant and secure Enterprise VOIP Service
    - Enterprise Email Scanning Service
  - 9). Modified SLA Ref#36 changed "components" to "functionality" in definition column

There are a total of 41 SLA's on revised Schedule F-1 Service Level Matrix.

4. The following additional exhibits in response to supplier questions have been posted to the supplier portal:
  - Exhibit U Replacement Ethernet Tab for Exhibit G (Round 2 Question 1).
  - Exhibit S RAS NPA NXX (Round 2 Question 37).
  - Exhibit R New Data BRI (Round 2 Question 89).
  - Exhibit T Voice Locations (Round 2 Question 92 and 93, and Round 1 Part 2 Question 263).
  - Exhibit Q InternationalMEXICO (Round 2 Question 98).



# Commonwealth of Pennsylvania

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Harrisburg, PA 17101

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Very truly yours,

Name: Kay Shaffer  
Title: Associate Commodity Manager  
Phone: 717-346-3830  
Email: kashaffer@state.pa.us



# Commonwealth of Pennsylvania

Date: **December 30, 2008**  
Subject: **Telecommunications Managed Services**  
Solicitation Number: **6100004339**  
Opening Date/Time: **February 17, 2009 at 1:00 pm EST**  
Addendum Number: **5**

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To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals).

*List any and all changes:*

All remaining questions and answers for both round one and round 2 will be posted to the supplier portal by close of business Wednesday, January 7, 2009.

The due date for round three questions has been extended to 5:00 pm EST on Monday, January 12, 2009.

## **For electronic solicitation responses via the SRM portal:**

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555 Walnut Street, 6th Floor  
Harrisburg, PA 17101

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Very truly yours,

Name: Kay Shaffer



# Commonwealth of Pennsylvania

Title: Associate Commodity Manager  
Phone: 717-346-3830  
Email: [kashaffer@state.pa.us](mailto:kashaffer@state.pa.us)





# Commonwealth of Pennsylvania

Date: **January 7, 2009**  
Subject: **Telecommunications Managed Services**  
Solicitation Number: **6100004339**  
Opening Date/Time: **February 17, 2009 at 1:00 pm EST**  
Addendum Number: **6**

---

To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals).

*List any and all changes:*

Final round 1 questions and answers will be posted at a later date along with the final (round 3) questions and answers.

Final round 2 questions and answers have been posted. This document is labeled: Questions Round 2 Part 2.

Additional exhibits have been posted to expand on some of the questions and answers. These are:

Exhibit V COPANET Site Inventory

Exhibit W1 COPA Phase 1 Sites

Exhibit W2 COPA Phase 2 Sites

Exhibit X Web Filtering Scope

## **For electronic solicitation responses via the SRM portal:**

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- To attach the Addendum, download the Addendum and save to your computer. Move to "My Notes", use the "Browse" button to find the document you just saved and press "Add" to upload the document.
- Review the Attributes section of your solicitation response to ensure you have responded, as required, to any questions relevant to solicitation addenda issued subsequent to the initial advertisement of the solicitation opportunity.

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# Commonwealth of Pennsylvania

Very truly yours,

Name: Kay Shaffer  
Title: Associate Commodity Manager  
Phone: 717-346-3830  
Email: [kashaffer@state.pa.us](mailto:kashaffer@state.pa.us)



# Commonwealth of Pennsylvania

Date: **February 4, 2009**  
Subject: **Telecommunications Managed Services**  
Solicitation Number: **6100004339**  
Opening Date/Time: **March 3, 2009 at 1:00 pm EST**  
Addendum Number: **7**

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To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals).

*List any and all changes:*

1. The due date for proposals has been extended to March 3, 2009 at 1:00 pm EST
2. A previously answered question has now been revisited as follows:  
"Would the Commonwealth consider selling the campus backbone "COPANET"?"

Original Answer – No. Please see Round 1 Question 267 (posted with Addendum 1) and it's answer.

New Answer – The Commonwealth is willing to consider creative approaches to the management of the campus backbone "COPANET." The Commonwealth would expect the Offeror to provide a brief description of its approach, the assumptions it is making, the risks that might arise, and the expected benefits of such an approach. The approach should be included in the Technical Solution section as an option for consideration. Please note that the Offeror's proposed solution and associated pricing should not include the assumption of the "sale" of COPANET.

3. The Commonwealth is hoping to have all final questions and answers posted to the Supplier Portal by Wednesday, February 11, 2009.

## **For electronic solicitation responses via the SRM portal:**

- Attach this Addendum to your solicitation response. Failure to do so may result in disqualification.
- To attach the Addendum, download the Addendum and save to your computer. Move to 'My Notes', use the "Browse" button to find the document you just saved and press "Add" to upload the document.
- Review the Attributes section of your solicitation response to ensure you have responded, as required, to any questions relevant to solicitation addenda issued subsequent to the initial advertisement of the solicitation opportunity.

## **For solicitations where a "hard copy" (vs. electronic) response is requested:**

- Attach this Addendum to your solicitation response. Failure to do so may result in disqualification.
- If you have already submitted a response to the original solicitation, you may either submit a new response, or return this Addendum with a statement that your original response remains firm, by the due date to the following address:

PA Department of General Services  
Kay Shaffer



# Commonwealth of Pennsylvania

555 Walnut Street, 6th Floor  
Harrisburg, PA 17101

Except as clarified and amended by this Addendum, the terms, conditions, specifications, and instructions of the solicitation and any previous solicitation addenda, remain as originally written.

Very truly yours,

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# Commonwealth of Pennsylvania

Date: **February 12, 2009**  
Subject: **Telecommunications Managed Services**  
Solicitation Number: **6100004339**  
Opening Date/Time: **March 3, 2009 at 1:00 PM EST**  
Addendum Number: **8**

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To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals).

*List any and all changes:*

1. Round 3 questions and answers have been posted.
2. Final Round 1 questions and answers have been posted.
3. The following attachments have been posted:
  - Exhibit Y1 Payphone Rates (Round 1 Questions #180, #181, and #184-187)
  - Exhibit Y2 Payphone Info RFP1 (Round 1 Questions #180, #181 and #184-187)
  - Exhibit Y3 Payphone Info RFP2 (Round 1 Questions #180, #181, and #183-187)
  - Exhibit Z1 ACD COPA Features (Round 3 Question #22)
  - Exhibit Z2 Managed Services December Snapshot (Round 3 Questions #7 and #44)
  - Exhibit Z3 Broadband by City (Round 3 Questions #14)
  - Exhibit Z4 Inbound TollFreeNmbrs (Round 3 Question #20)
4. A document titled "Prevailing Minimum Wages.doc" has been attached. This language is incorporated as section #73 of Appendix A (Terms and Conditions).
5. A revised Supplier Pricing Form spreadsheet has been posted, it is listed as: Exhibit D Service Provider Pricing Forms v3.xls. This is in response to Round 1 Questions 8 and 9.

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