

3.5 NATIONAL POLICY-BASED REQUIREMENTS (L.34.1.3.5, M.2.2.1)

In times of emergency, Agencies must be assured that their critical communications services are protected or restored as soon as possible. Qwest has provided NS/EP services through active Telecommunications Service Priority program support since its origin. Qwest is dedicated to providing the most robust National Capital Region architecture as possible by protecting our infrastructure to ensure that our services comply with all applicable Government regulations for accessibility.

[Redacted content]



Qwest's planning function is the first in a succession of process elements to ensure our ability to meet NS/EP responsibilities for both day-to-day activities and long-term contingency plans.

Figure 3.5-1 provides an easy reference to correlate narrative requirements to our proposal response.

Figure 3.5-1. Responses to Narrative Mandatory Service Requirements

Req_ID	RFP Section	Proposal Response
34486	C.5.2.2	3.5.1
34509	C.5.2.7 (2)	3.5.3

3.5.1 NS/EP Basic Functional Requirements (Req_ID 34486, L.34.1.3.5 (a), C.5.2.2.1)

Qwest uses a structured multi-layered approach to supporting NS/EP that is designed to address each required function. Qwest has integrated risk management and security both organizationally and strategically to encompass information technology and physical security. Our priorities are to protect Agencies from the physical layer up through the entire OSI stack including all facets of cyber security.

Our approach ensures that Qwest complies with the Government's telecommunications requirements for NS/EP survivability, interoperability, and operational effectiveness during an emergency threat whether caused by natural hazards, manmade disasters, infrastructure failures, or cyber events. Our approach consists of multiple levels of NS/EP support including the

assignment of a full-time dedicated liaison, established Telecommunications Service Priority (TSP) policies and procedures, implementation of the 14 basic NS/EP telecommunications functional requirements, and our robust redundant network architecture in the National Capital Region (NCR).

[REDACTED]

[REDACTED] He will be on site to support the Network PMO within four hours of receiving telephone and/or email notification of a disaster/emergency. [REDACTED] will have the ability to draw on the expertise of many professionals within the corporation such as the corporate director for NS/EP and the executive-level officials throughout Qwest.

[REDACTED]

Qwest's implementation of the telecommunications policies and procedures established by the NCS is in accordance with Executive Order 12472. Qwest's approach ensures that critical key official users at Federal

Agencies can communicate with other key officials at Federal Agencies, state, local, and tribal government and industry organizations when faced with actual or potential emergencies that threaten the security or the economic capabilities of the U.S. locally, nationally, or internationally.

Specifically, Qwest follows the recommendations and complies with approved applicable NCS, Convergence Task Force (CTF), American National Standards Institute (ANSI), International Telecommunications Union-Telecommunications Service Sector (ITU-TSS), 3rd Generation Partnership Project (3GPP), Internet Engineering Task Force (IETF), Federal Communications Commission (FCC), Alliance for Telecommunications Industry Solutions Telecom Management and Operations Committee (ATIS TMOC), and International Telecommunications Union-Emergency Telecommunications Service (ITU-ETS) standards listed in Request for Proposal (RFP) Section C.5.1. Qwest understands the importance of staying informed and keeping current with ANSI T1, ITU-TSS, and 3GPP standards, particularly to ensure the interoperability of NS/EP services during emergencies. Qwest's NS/EP liaison will notify the Networx PMO of the status of upcoming standard adoptions, industry acceptance, commercial availability, Qwest's technology refreshment schedules, and the implementation of related services or network elements.

Basic Functional Requirements (C.5.2.1)

Qwest supports the following 14 basic functional requirements for NS/EP telecommunications and IT services. These are identified by the NCS and the Office of Science and Technology Policy for NS/EP telecommunications services as follows:

1. Enhanced Priority Treatment. (C.5.2.1(1))

During times of national emergency, Qwest has established policies, plans, and procedures for provisioning and restoring Government data and

voice services according to NCS TSP priority levels. After TSP, Qwest prioritizes fire, life, safety, and the remainder of any multi-user impacting faults. Where appropriate and feasible, Qwest deploys multiple teams to assess, analyze, and restore services.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Qwest can set up, configure, and provide access for users who require preferential and priority transmissions during emergencies.

Figure 3.5.1-1 demonstrates that Qwest's services support Enhanced Priority Treatment today. [REDACTED]

[REDACTED]



Figure 3.5.1-1. Qwest's Networkx Services Support Enhanced Priority

1. Enhanced Priority Treatment															
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTS	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTeIS, VOIPTS, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

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2. Secure Networks. (C.5.2.1(2))

Qwest's priority for providing secure network services is to focus on prevention, detection, response, and event mitigation. Qwest regularly schedules vulnerability assessments and updates survivability plans accordingly. All data and voice services are designed with security control mechanisms. Active fraud detection and prevention is designed into voice products, and all systems supporting services are designed with access and audit control features.



All Qwest data network operations support systems require encryption and two-factor (two independent ways to establish identity and privileges) authentication for router access:





Figure 3.5.1-2 shows the services that support NS/EP Secure Networks functions. Qwest’s standard engineering processes encompass support for secure networks as a part of service design and implementation. Services ordered by the Government with particular security requirements will be engineered and managed to include expanded encryption techniques and user authentication.

Figure 3.5.1-2. Qwest’s Networkx Services Support Secure Networks

2. Secure Networks															
*	*	*		*	*	*		*							
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS*	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTelS	VOIPTs	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTelS, VOIPTs, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

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3. Non-Traceability. (C.5.2.1(3))



Qwest supports non-traceability across multiple services for Federal Agencies today. The technical solution to implementing non-traceability for selected users varies based upon the services and protocols involved. Qwest’s standard engineering processes encompass support for non-traceability as a part of service design and implementation for selected users. Services ordered by the Government with non-traceability will be engineered

and managed to prevent users from being traced and identified and to inhibit location identification.

Figure 3.5.1-3 depicts the services that support NS/EP Non-Traceability functions in green cells.

Figure 3.5.1-3. Qwest’s Networkx Services Support Non-Traceability

3. Non-Traceability															
*	*	*		*	*	*		*							
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS*	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTS	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTeIS, VOIPTS, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

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4. Restorability. (C.5.2.1(4))

Qwest complies with all applicable requirements of the National Communications System (NCS) Directive 3-1, TSP System for NS/EP and NCS Manual 3-1-1, "Service User Manual for the TSP System." Qwest has established policies and procedures to manage the restoration of services according to TSP restoration priority levels.

The Disaster Recovery/NS/EP liaison administers the TSP program for Qwest, and the Dedicated Qwest Director for NS/EP, a Principal on the National TSP Oversight Committee, will directly coordinate with the Networkx PMO to ensure that the Qwest Networkx Contractor Program Office (CPO) will have immediate awareness of service disruptions that affect Agencies. Please note that Qwest’s standard network inventory and fault management systems and business processes manage restoration according to TSP today; this is a standard business process. The Director provides an oversight role to ensure that NS/EP service restoration is completed according to TSP priority levels.

Figure 3.5.1-4 highlights Qwest's support for NS/EP restorability according to TSP priority levels. Qwest's standard engineering processes encompass support for restorability as a part of service design and implementation. Services ordered by the Government with TSP will be engineered and managed to provide restoration priority.

Figure 3.5.1-4. Qwest's Networkx Services Support Restorability

4. Restorability															
*	*	*		*	*	*		*							
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTS	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTeIS, VOIPTS, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

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5. International Connectivity. (C.5.2.1(5))

Qwest supports international access and egress (origination and termination) for all required services today as a standard operating procedure. For example, Qwest has numerous connection points to international carriers providing interconnections for data products such as Asynchronous Transfer Mode (ATM), Frame Relay (FR), private IP services, and Internet access. [REDACTED]

[REDACTED]

[REDACTED] Qwest also provides connectivity to off-net locations using IPsec over dedicated IP interfaces from any service provider around the world.

Figure 3.5.1-5 highlights service connectivity that Qwest provides internationally. Please note that in addition to the seven services mandated for international connectivity in C.5.2.1, Qwest also supports international connectivity for other services including Toll-Free Service (TFS), Frame Relay Services (FRS), Asynchronous Transfer Mode Service (ATMS), and Network-Based Internet Protocol Virtual Private Network Services (NBIP-VPNS). Qwest’s standard engineering processes encompass international connectivity as a standard part of service design and implementation. For example, Qwest continues to actively participate in standards bodies working to develop international interoperability for Layer 2 Virtual Private Network Services (L2VPNs) (e.g., Virtual Private LAN Services, Network to Network Interface). As such standards are developed, Qwest will implement accordingly.

Figure 3.5.1-5. Qwest’s Networkx Services Support International Connectivity

5. International Connectivity															
*		*			*										
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTS	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTeIS, VOIPTS, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

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6. Interoperability. (C.5.2.1(6))

Qwest offers a wide variety of standards-based interconnections. Our *any access* approach to network architecture includes access tandems as well as, private and public peering arrangements to enable interoperability with Government and other private facilities. Qwest can interconnect to existing Government or private networks using [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] For example, Qwest has [REDACTED] [REDACTED] as well as private peering with the leading international Internet Service Providers (ISPs) to improve global Internet performance.

Qwest provides services to the world's largest ISPs including MSN, as well as numerous Agencies and Fortune 500 companies. Qwest already provides IP services to several Agencies, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Qwest's standard engineering processes encompass support for interconnections and interoperability as a part of service design and implementation. Services ordered by the Government with requirements to interconnect to other Government or private networks will be designed and implemented using defined interoperability standards.

Figure 3.5.1-6 highlights interoperability.

Figure 3.5.1-6. Qwest's Network Services Support Interoperability Requirements

6. Interoperability															
*		*		*	*	*		*							
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS*	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTs	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTeIS, VOIPTs, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

7. Mobility (C.5.2.1(7))

Qwest supports the mobility of Agency users who require data and voice services through nationwide and non-domestic Mobile Virtual Network Operator arrangements using leading-edge Code Division Multiple Access technology and 1xRTT and Evolution Data Only data services. Qwest also provides 802.11a, b, and g roaming and dial-up Internet services to enable VPN access virtually anywhere in the world.

Further, interoperability with other mobile devices (e.g., HF radio) has been demonstrated for a range of standard voice and data services, for example, under the GETS program. Qwest’s standard engineering processes include support for mobile services and special engineering of mobility interconnections as a part of service design and implementation. Services ordered by the Government with requirements for mobility will be designed and implemented to comply fully with Agency requirements.

Figure 3.5.1-7 highlights services that support NS/EP’s requirements for mobility.

Figure 3.5.1-7. Qwest’s Networkx Services Support Mobility

7. Mobility															
*	*	*		*	*	*	*	*							
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS*	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTS	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, PLS, EthS, L2VPNS, IPTeIS, VOIPTS, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

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8. Nationwide Coverage. (C.5.2.1(8))

Qwest’s voice and data services are available to all Local Access Transport Areas (LATAs) nationwide to support national security leadership and inter- and intra-Agency telecommunications during emergency

operations. Qwest also has established connectivity to Outside Continental United States (OCONUS) U.S. territories [REDACTED]

Figure 3.5.1-8 highlights access for Agency users to Qwest's services. Qwest's standard service footprint fulfills all mandatory Networkx requirements for geographic coverage.

Figure 3.5.1-8. Qwest's Networkx Services with Nationwide Coverage

8. Nationwide Coverage															
*	*	*		*	*	*		*							
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTS	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTeIS, VOIPTS, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

431-ENT

9. Survivability/Endurability (C.5.2.1(9))

Qwest voice and data services have been engineered with redundant equipment and circuit links in each Point-of-Presence (POP). Backup power and seismic-tolerant facilities (where appropriate) also support survivability. Qwest's standard is for our fiber network plant to be buried more than four feet in the ground along railroad rights-of-way to significantly reduce the chances of natural or man-made disasters affecting services. In cases where this is not possible, other hardening approaches (e.g., steel conduit or concrete encasing) are applied.

[REDACTED]

[REDACTED] Network facilities have back-up generators, dual battery systems, and redundant Heating Ventilation and Air Conditioning (HVAC). Field operations staff performs regular preventative maintenance to ensure normal optimal

operations. In the event of an emergency, the same staff will perform the emergency maintenance required to re-establish normal operations. In seismically active areas, facilities are engineered to reduce damage in the event of an earthquake. Qwest's network can re-route traffic around failed network components and facilities with full transparency to the end user. This re-route occurs in less than 100 milliseconds. We also use comprehensive monitoring and alarming of infrastructure components for status notification of the network.

Agencies can order services with dual access arrangements across physically diverse paths between Agency Service Delivery Point (SDP) locations, Local Exchange Carriers (LECs), Competitive Local Exchange Carriers (CLECs), other communications providers, and Qwest POPs.

[REDACTED]

[REDACTED]. Specific to Networkx, Qwest supports all critical Acceptable Quality Levels (AQLs) (e.g., for SDP-to-SDP high availability) as required. Services ordered by the Government with requirements for critical availability will be designed and implemented to comply fully with Agency requirements.

Figure 3.5.1-9 highlights Qwest's services that are designed, operated, and maintained meeting NS/EP survivability and endurance requirements.

Figure 3.5.1-9. Quest's Networkx Services Support Survivability/Endurability

9. Survivability/Endurability															
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTelS	VOIPTs	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTelS, VOIPTs, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

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10. Voice Band Service. (C.5.2.1(10))

Qwest offers a facilities-based network to support presidential voice band communications. Our Federal Service Center specifically responds to presidential travel requirements and will be tied directly to our Network CPO. Qwest’s standard engineering processes include support for voice service requests supporting presidential communications requirements. Services ordered by the Government with requirements presidential voice service support will be designed and implemented to comply fully with GSA and Agency requirements.

Figure 3.5.1-10 highlights voice services that will support this functional requirement.

Figure 3.5.1-10. Qwest Supports Presidential Communications

10. Voice Band Service															
VS *	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTelS	VOIPTs	CIPS

* Supported on contract award per RFP C.5.2.2

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11. Broadband Service. (C.5.2.1(11))

Qwest provides a nationwide Macro high-performance fiber optic backbone that supports broadband voice services and data requirements ranging from 64 Kbps Digital Signal Zero (DS-0) to multi-gigabit private MPLS networks, as well as Dense Wave Division Multiplexing wavelength services and dark fiber to the end user. Qwest's Quality of Service mechanisms enable real-time applications over our converged data network. Qwest offers all mandatory Network broadband services and, as noted above, can perform special NS/EP or TSP-related handling as ordered by Agencies. Qwest’s

standard engineering processes include support for broadband services as a part of service design and implementation. Broadband services ordered by the Government will be designed and implemented to comply fully with GSA and Agency requirements.

Figure 3.5.1-11 highlights Networkx services that operate over Qwest's broadband service.

Figure 3.5.1-11. Qwest Supports Broadband

11. Broadband															
VS	TFS	ACS	VTS	FRS *	IPS *	NBIP-VPNS *	PBIP-VPNS	ATMS *	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTs	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, PLS, EthS, L2VPNS, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

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12. Scalable Bandwidth. (C.5.2.1(12))

Qwest has a wide range of transport and data services that provide capabilities from 64 Kbps up to 10 Gbps. With Qwest's Customer Network Management (CNM) solution, NS/EP users are able to manage the capacity of their communications services to support variable bandwidth requirements. NS/EP users can create circuits from T1 to OC-192 and add additional bandwidth capacity quickly when needed through automated processes ("point-and-click" features) under their control. Additional features of CNM solutions include 1) customer-centric partitioned view of the network down to the device, port, and tributary, 2) full control of their network, including setting up, modifying, and tearing-down circuit connection and 3) real-time notification of alarms and performance reports.

Figure 3.5.1-12 highlights services that have the capability for variable bandwidth user management.

Figure 3.5.1-12. Qwest’s Support for Scalable Bandwidth

12. Scalability															
VS	TFS	ACS	VTS	FRS *	IPS *	NBIP-VPNS *	PBIP-VPNS	ATMS *	SMES	PLS	EthS	L2VPNS	IPTelS	VOIPTs	CIPS

* Supported on contract award per RFP C.5.2.2 (PBIP-VPNS, EthS, L2VPNS and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed).

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13. Affordability (C.5.2.1(13))

Qwest actively leverages and optimizes our commercial assets and deploys commercial-off-the-shelf technologies after rigorous testing in our integration and test laboratory to reduce implementation risk and minimize cost to the end user. Qwest is also integrating our data network infrastructure combining traditional data networking with IP-based services. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Qwest’s ability to automate the management of multiple network domains with multiple security policy rule sets implemented in multiple systems also helps to minimize costs by increasing efficiency.

Figure 3.5.1-13 highlights the fact that Qwest supports NS/EP requirements for cost effectiveness in the Network services.

Figure 3.5.1-13. Qwest’s Networkx Services Offer Agencies Affordability

13. Affordability															
*	*	*		*	*	*			*						
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTS	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTeIS, VOIPTS, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed) 436-ENT

14. Reliability/Availability (C.5.2.1 (14))

Qwest’s approach to product development, engineering, and operations continually optimizes services to ensure conformance with design requirements and specifications. Qwest engineers will also recommend and design solutions for additional reliability and availability to meet Agency-specific needs. Qwest is a performance-based service provider, reporting on all required key performance indicators and meeting all AQLs.

Qwest maximizes availability of POP-to-POP services through the use of survivability solutions including SONET ring protection, [REDACTED] and automatic ATM and FR PVC remapping. In addition, as previously explained, Qwest offers a full range of routine and critical availability access options to ensure that service reliability and availability requirements are fulfilled.

Figure 3.5.1-14 highlights the fact that Qwest can assure Agencies that services will be available and reliable whenever they need them. Qwest’s standard engineering processes support fulfillment of both routine and critical services as ordered by an Agency.

Figure 3.5.1-14. Qwest Ensures Reliability/Availability for NS/EP Services

14. Reliability/Availability															
*	*	*		*	*	*		*							
VS	TFS	ACS	VTS	FRS	IPS	NBIP-VPNS	PBIP-VPNS	ATMS	SMES	PLS	EthS	L2VPNS	IPTeIS	VOIPTS	CIPS

* Supported on contract award per RFP C.5.2.2 (VTS, PBIP-VPNS, SMENS, PLS, EthS, L2VPNS, IPTeIS, VOIPTS, and CIPS will be supported after ANSI T1 and ITU standards are formally approved and commercial feasibility is developed). 437-ENT

Qwest's NS/EP FRIP Part A includes support for the aforementioned 14 requirements in accordance with RFP Section C.7.16.

3.5.2 Protection of SS7 and Satellite Command Link (As Applicable (L.34.1.3.5(b), C.5.2.5))

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

Protection of Satellite Command Link

[REDACTED]

3.5.3 NCR Network Architecture (L.34.1.3.5 (c))

As discussed in Section 3.2, Qwest provides network services in the NCR with a robust network architecture designed and engineered to ensure service continuity in the event of significant facility failures or catastrophic impact. Qwest will continue to engineer critical services to meet each Agency's requirements to eliminate potential single points of failure or overload conditions that may affect their network service performance.

Qwest has an active compliant NS/EP plan. Qwest has been providing TSP services locally for decades and nationally for more than five years with an excellent track record of meeting our customers' critical and emergency requirements. Qwest also provides functionality that enables GETS priority calling mechanisms.

Qwest will update NS/EP FRIP plans, including Part B addressing our strategy for supporting Agency NCR requirements in accordance with RFP Section C.7.16.

Qwest understands the Government's requirement to assure performance of network services in and around the NCR. [REDACTED]

[REDACTED] Each of these gateways provides complete redundancy to access Qwest nationwide and international network capabilities as well as regional voice and data services. [REDACTED]

[REDACTED] serves both as an access POP, IP services node, and high-availability collocation and hosting center (frequently referred to as a Qwest CyberCenter™ in this proposal response).

Qwest has multiple [REDACTED]

[REDACTED] This configuration enables these three locations to participate in the routing of access and backbone traffic, providing significant load-balancing and reconfiguration options in the event of a switch, router, or even a complete POP failure. Qwest has recently acquired OnFiber, a metro SONET and Ethernet provider with yet another diverse network in the NCR. This gives Qwest at least three regional fiber optic networks to use to ensure redundancy and survivability in the greater Washington D.C. area. In effect, this means that Qwest can completely avoid Washington, D.C. to continue to provide services in an emergency. Additionally, this configuration provides

numerous options for routing within the NCR in the event of localized outages within the NCR.

[REDACTED]

[REDACTED]

[REDACTED] As presented in Section 3.2.2, Qwest connects to several major ILEC POP locations through SONET-ring protected networks to ensure multiple access paths to the ILEC's services, including voice termination and fiber access. The use of CLECs, who provide infrastructure that is generally separate from the ILECs, gives another level of resiliency to the architecture because these services would not be affected by an ILEC facility failure.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Using our diverse access infrastructure, this affords the maximum protection for an Agency in the event of the loss of a switch or transport system failure. The route diverse SONET backbone and access networks that service the NCR enable the transport of services to any Qwest POP nationwide. With voice services, critical Qwest customers can be dual-homed to ensure extremely high availability of their services—again protected from any single point of failure in the NCR.

[REDACTED]

[REDACTED] Qwest peers with the largest ISPs at seven private peering locations geographically distributed through the United States. The loss of a peering point has virtually no effect on our ability to provide high-quality access to the Internet. [REDACTED]

[REDACTED]

In total, Qwest can dual-home critical Agency connections with complete route diversity to all of Qwest's data networking services to have complete resiliency from facility failures in the NCR.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Technical Systems, Administration, Management and Operations Requirements for the National Capital Region (Req_ID 34509, C.5.2.7 (2))

Qwest supports the National Communication System (NCS) with full-time staff located at the NCS. This enables Qwest to provide full coordination with the Government in times of emergency. Therefore, all of the administration, management, and operations requirements for the NCR are embedded as part of the normal procedures of the NCS detailed in Part A of the FRIP. This includes the GETS and TSP processes and procedures described above.

Qwest will address the strategy, technical systems, and administration, management, and operation requirements for the NCR in part B, in addition to part A, as part of our draft NS/EP FRIP as Appendix 2 to the Technical volume. The final NS/EP FRIP will be delivered on contract award as specified in RFP Section C.5.2.2. Qwest will revise the complete plan as required by the Networx PMO no later than 15 business days after notification by the Government. Qwest will update its FRIP at least annually and provide it to the Networx PMO for approval.

3.5.4 Section 508 (L.34.1.3.5 (d), C.6.4)

Qwest's approach to meeting Section 508 criteria for the services identified in Section C.6.4 of the RFP includes a range of activities to ensure

that *all* users are able to access all services offered through the Networx contract vehicle.

Qwest achieves compliance by performing the same rigorous testing and evaluation processes that all products and services go through before they are made available to the public. To ensure products and services are 508 compliant, Qwest continues tests and evaluations with industry and specific AT vendors to assess interoperability with TeleTYpewriter (TTY) and Associative Technology (AT) devices.

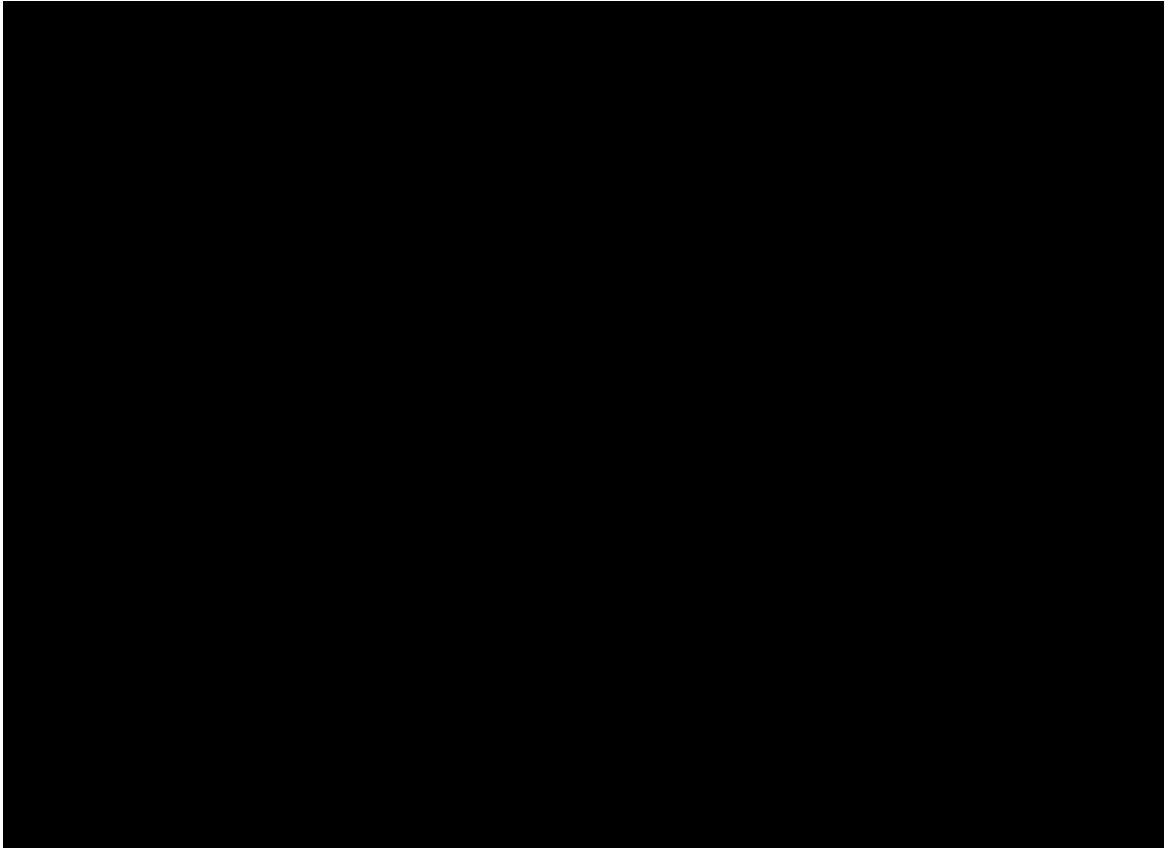
Qwest has enlisted a single toll-free number for 24x7x365 access: 1-866-GSA-NETWorx (1-866-472-6389) that will provide Agencies with direct access to our Customer Support Office (CSO), which will also be 508 compliant, enabling access by email, fax, TTY, telecommunications display devices, text messaging, or other methods as required. Qwest customer service support will be accessible around the clock for all Agency users, wherever they may be located. To ensure this, the Qwest Control Networx Portal, the gateway to Qwest Networx support systems, will also be 508 compliant. This portal will serve as the primary conduit for daily status pertaining to ongoing projects and other service delivery activities for Agencies.

The following describes Qwest's approach for maintaining compliance with Section 508. Our approach for 508 compliance starts at lifecycle initiation and flows through transition, testing, and operations.

Step 1: Discovery and Scoping

As part of Qwest's Networx deliverables, [REDACTED] lists the Voluntary Product Accessibility Templates (VPATs) developed for each offered product and service applicable for Networx services as required.

The VPATs, including the relevant provisions of Subparts B, C, and D listed below, are included in the Technical Volume Appendices.



- 1194.21 Software Applications and Operating Systems
- 1194.22 Web Based Internet Information and Applications
- 1194.23 Telecommunications Products
- 1194.31 Functional Performance Criteria
- 1194.41 Information, Documentation, and Support

The purpose of this evaluation is to identify and resolve compliance gaps in existing requirements or products. This information will also be used to develop future releases of Qwest products/services to ensure compliance with Section 508.

Qwest's Section 508 Project Manager (PM) is responsible for the testing and integration of products and services with Assistive Technologies in a lab environment. The PM will also work with SED manufacturers and

service providers to ensure that Section 508 compliance is an integral part of the design process for all new and future hardware and software releases.

The 508 PM will report to Qwest's Program Director every month providing any updated VPATS and Technical Reports as required by Section C.7 and C.6.5 of the RFP that will be made available to GSA's Networx PMO.

Step 2: Publish Design Guidelines

This step focuses on developing accessibility design guidelines for use and reference by its internal software development teams, Qwest consultants, and partners. The guidelines will be updated as tools are identified for developers and implementers to use in the design, development, and testing of the business application. This form will be reviewed and updated at least monthly and will be addressed as part of each project's monthly review with the Networx program manager.

Training may be delivered via meetings and briefings, classrooms, seminars, instructor-led and non-instructor online Web-based self study, and manuals or desktop guides. For training delivered via meetings, briefings, classrooms, and seminars, assistance such as signers and Braille products will be provided to disabled trainees when requested in advance by the Agency concerned. For training delivered via instructor-led and non-instructor online Web-based study, the same capabilities provided for Internet reporting shall be provided to disabled trainees. For self study and manuals or desktop guides using audio/video tapes, CD-ROM, or DVD, Qwest will comply with the relevant provisions as shown in Figure 3.5.4-1.

Qwest has the ability to print and deliver Braille material, including training materials. Qwest has relationships with many sign language interpretive vendors to supplement the ability to deliver this type of quality service. Among these are vendors who provide similar services under GSA schedule. To ensure that the training associated with the products and

services are 508 compliant, Qwest continues tests and evaluations with industry and specific AT vendors to assess interoperability with TTY and AT devices. Qwest follows all applicable Section 508 guidelines and relevant Subparts. For example, for audio tapes, the material is created so that diagrams and any other visual aids that may be used in other versions are fully explained. For video, the script is displayed on the screen readable by the viewer. For training delivered via instructor-led and non-instructor online Web-based products, the same capabilities provided for Internet reporting will be provided to disabled employees. To coordinate compliance with 508 requirements, Qwest has a 508 compliance team that will report directly to the Qwest Networx Enterprise Program Director. The Qwest 508 team will also be responsible for providing documentation and training manuals for use in Networx training. Internal to Qwest, all material placed on the Internet or in Web formats must go through a testing process to ensure 508 compliance. This process is for all Qwest material, not just training material or Network Enterprise material. Qwest achieves compliance by performing the same rigorous testing and evaluation processes that all products and services go through before they are made available to the public.

The 508 PM will be responsible for managing the development of Qwest-offered Networx products and services training, documentation, manuals, user guides, audio/visual tapes, CD ROMS, and DVDs for disabled users in response to Agency task order requirements. The PM will also be responsible for managing the deployment of training assistance for disabled users at meetings, seminars, and classroom training in response to advance notice provided by Agency task orders.

Step 3: Ensure Future Releases are Compliant

Compliance gaps identified in the discovery and scoping step will be reported to the development organization, where they will be treated the

same as programming errors, receiving a high level of attention until resolution. Qwest is evaluating several automated compliance testing software options to speed up the compliance verification process. Compliance checks, which include automated software checks, will ultimately be integrated into the Qwest software development lifecycle as standard procedures.

Qwest continues to explore ways to participate in programs focused on accessibility and to sponsor programs offered by universities, organizations, and institutions that are actively involved in the field of software accessibility and Section 508 compliance.

Subpart C, Functional Performance Criteria

We are committed to ensuring that the services offered work together with disabled employees and citizens' AT to meet their needs and satisfaction with Qwest's services.

Agencies may have a variety of disabled users, accessing a variety of systems, equipment, and applications using a variety of Networx services. Qwest determined that the following principles are important guidelines to ensure disabled user satisfaction with our products and services:

- Support specific Agency requirements for users
- Provide equivalent access to auditory and visual content based on specific Agency requirements
- Provide interoperability and compatibility with AT and include complete keyboard access when applicable
- Provide context and system orientation information when needed and where required
- Follow Section 508 specifications and guidelines to ensure compliance and confirm products and services meet requirements

VPATs for each offered service are included in the Technical Volume, Appendix 1 Section 508 Forms. The VPATs include responses for Subpart C, Functional Performance Criteria, and paragraph 1194.31.