## *3.4 PREPARATION OF TRANSITION TPSPS AND ALTPS*

Working with the Agencies, Qwest will develop either a TPSP or an ALTP, as requested, and in compliance with RFP Sections C.4.2.3, C.4.2.4, C.4.4.3.1.4 and C.4.4.3.2.4. We will deliver them in the media requested by the Agencies and in the time frames specified.

### 3.4.1 Identifying Concrete Schedules, Milestones, and Additional Support Plans

Qwest will follow the same procedures in this plan and in the final TMP to develop the ALTPs, and when required, the TPSPs. Schedules, milestones and any additional support plans will be developed with specifics for that Agency or special project in coordination and collaboration with the Agency. Procedures described in Planning and Management (Section 2.0), Transition Cutover (Section 3.0), Transition Inventory (Section 4.0), and Communications and Reporting (Section 5.0), will be followed, tailored to the specific Agency or project.

### *3.4.1 1 Identifying Other Required Information*

In meeting with the Agencies and while conducting any necessary site visits or information gathering visits, Qwest will identify, in coordination and partnership with the Agency and GSA, any other required information necessary to input into the ALTP or TPSP.

### *3.4.1.2 Formats*

Qwest will use the format shown in RFP Section C.4.4.3.1.3 and C.4.4.3.1.4 for the ALTP, and RFP Section C.4.4.3.2.3 for the TPSP. If required by the Agency, or if necessary for a specific project as determined during initial coordination meetings, Qwest will add any additional information or data to the formats above to accommodate Agency requirements.

## *3.5 CONTINUITY AND QUALITY OF SERVICES FOR PROVISIONED SERVICES USING DEDICATED ACCESS*

### 3.5.1 Operation of Services in Parallel

## 3.5.2 Cutover Of Services When Parallel Access Is Available But Agency Cannot Support Or Does Not Want To Operate Services In Parallel

If parallel access is available, (e.g., LEC facilities) but the Agency does not want to operate services in parallel,

### 3.5.3 Cutover Of Services When Parallel Access Is Not Available

*3.6 MAINTAINING CONTINUITY AND QUALITY OF SERVICES FOR PROVISIONING SERVICES USING SWITCHED ACCESS*

For existing Plain Old Telephone Service (POTs) lines, the process for switched outbound LD service consists of adding Automatic Numbering Identification (ANIs) to the Qwest LD switching, OSS and billing systems. The ANIs should be provided by the Agency as part of the transition order to ensure the correct ANIs are recorded by Qwest.

If the customer is ordering new POTs access lines and at the same time requesting Qwest LD for the new lines, the customers should request carrier identification code (CIC) 0432 as the primary interchange carrier (PIC). The customer will then communicate the new ANIs to Qwest to add to the customer account.

### 3.6.1 Procedure For Switching The Customer ANIs Away From Another IXC To Qwest LD

The customer must submit in writing the list of ANIs to change to Qwest. The form will be provided to the customer and will include language ensuring the customer is giving permission to Qwest to change their PIC on their behalf.

The list of ANIs to move from an existing IXC to Qwest will be added to the customer's account and a Customer Account Record Exchange (CARE) (an industry standard system to communicate PIC changes to ILECs) outbound message will be sent to the serving LEC requesting a PIC change to the Qwest CIC (0432).

The ILECs usually will process a POTs line PIC change within 24 hours of the request. Complex local access services (for example, PRI) may take up to three days to process a PIC change.

The serving ILEC will normally return an industry standard CARE transaction code advising of the success or failure of the PIC change request. Failures are known as CARE rejects and are reworked by the Qwest Switched LD provisioning team.

The most common CARE reject is transaction code 2166, which indicates that a LEC "PIC freeze" is on the ANI, and the LEC will not allow an IXC requested PIC change.

## 3.7 REPRESENTATIVE SERVICE TRANSITION PLANS

The Qwest Team is offering the 36 required services as well as 3 optional services shown in **Figure A7-34.** For each service offered, Qwest will provide a service transition plan. Each service transition plan incorporates a description of the service and a plan for transitioning up to 50 percent of the workload for that service based on the information provided in J-7. These plans include a description of site preparation, activities required to complete cutover of the service, interoperability requirements, and a plan for 100 percent fall-back capability. Our transition overarching approach described throughout this PTMP applies to each individual plan, but the individual plans highlight unique areas specific to the transition of that particular service.

**Figure A7-34. Types of Services Offered**

| Type of Service | Service Description |
|---|---|
| Telecommunications Service | Communications Transport Services Category |
| | • Voice<br>• Circuit Switched Data<br>• Toll-Free<br>• Combined<br>• Private Line<br>• Frame Relay<br>• ATM<br>• Ethernet |
| | IP-Based Services Category |
| | • Premises-Based IP VPN<br>• Network-Based IP VPN<br>• Voice Over IP Transport<br>• Content Delivery Network<br>• Converged IP<br>• IP Telephony<br>• Internet Protocol<br>• Layer 2 VPN |
| | Optical Services Category |
| | • Synchronous Optical network<br>• Optical Wavelength<br>• Dark Fiber |

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| Type of Service | Service Description |
|---|---|
| Management and Applications Services | • Video Teleconferencing<br>• Managed Network<br>• Audio Conferencing<br>• Teleworking Service<br>• Call Center/Customer Contact Center<br>• Web Conferencing<br>• Dedicated Hosting<br>• Collocated Hosting<br>• Storage<br>• Customer-Specific Design and Engineering |
| Security Services | • Managed Firewall<br>• Intrusion Detection and Prevention<br>• Managed E-Authentication<br>• Vulnerability Scanning<br>• Antivirus Management<br>• Incident Response<br>• Secure Managed E-mail<br>• Managed Tiered Security |
| Wireless Services | • Cellular/PCS<br>• Multimode Wireless |

Service transition plans for all services listed in Figure A7-34 will be submitted with the initial TMP within 30 days of Notice to Proceed. Throughout this section, we have provided service transition plans for each of the 10 representative services listed in L.34.2.4:

- Voice Service (3.7.1)
- Toll-Free Service (3.7.2)
- ATM Service (3.7.3)
- Network-Based IP VPN Service (3.7.4)
- Voice over IP Transport Service (VoIPTS) (3.7.5)
- IP Telephony Service (3.7.6)
- Managed Network Service (MNS) (3.7.7)
- Call Center/Customer Contact Center Service (3.7.8)
- Managed Tiered Security Service (3.7.9)

- Cellular/PCS (3.7.10)

## 3.7.1 Voice Service

Qwest provides high quality voice service over our ████████████

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Based on the information provided in Table J.7 of the solicitation, Qwest has developed a transition plan for voice service to accommodate the cutover of ██████████████ dedicated access loops per month for an 18-month period. With the information provided it is difficult to determine the number of ANI's that would have to be transitioned for voice service using switched access. Qwest understands, through our work with the Metropolitan Area Acquisitions (MAAs), that there are thousands of ANIs that would be a part of this transition, and is prepared to support this activity████████████

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### *3.7.1.1 Site Preparation Requirements*

Minimal equipment (for example, a channel service unit) is normally all that is required to support the transition for voice service with dedicated access. The following must be available at the site to support the SED:

- Dedicated 120VAC, 15amp IG (isolated ground) circuit/receptacle including separate equipment ground wire per cabinet. Often there is adequate space on an existing rack to support the SED. If not, additional racks will be provided

- Plywood backboard mounted on the wall, with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable and a new backboard is not necessary
- Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent to 65 percent relative humidity, non-condensing

### 3.7.1.2 Activities Required to Complete Cutover of Service

Each transition includes activities that must be accomplished by the Qwest Team, Agency, GSA, LGC, and the incumbent contractor. ▮▮▮▮▮▮ is a Work Breakdown Structure (WBS) that lists all activities required for transition of voice services. ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ For each transition, the Qwest Team will customize the activities listed within this WBS in partnership with the affected stakeholders to incorporate any special requirements that may exist.

**Figure A7-35. Voice Service WBS**

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[Table with redacted content]

## 3.7.1.3 Arrangements Needed to Achieve Interconnectivity Between Incumbent Provider Network and Qwest During Transition of Service

[Content redacted]

## 3.7.1.3.1 Interconnectivity Using the Agency PBX as a Gateway

If there is no capability to establish a gateway between Qwest and the incumbent provider, the Agency may opt to use their own PBX as a gateway.

This would take the responsibility and control of the gateway out of the incumbent provider and give the Agency more control over the transition. This method will require a PBX on the customer's premise with the capability and excess port capacity to terminate both Qwest and the incumbent's service into it. This will avoid completing calls via off-net during transition and ensure that only Networx rates apply to the calls (versus off-net rates).

**3.7.1.3.2 Interconnectivity via Inbound Call Routing**

Routing inbound calls via LEC facilities is the less desirable option for transitioning services to Qwest, due to the inherent risks associated with LEC support, as well as loss of overall control of the process.

In addition, there may not be enough LEC capacity to carry the calls during the transition. Thus, the LEC capacity must be verified during the planning stage. If it is determined that there is not enough capacity, the customer may be required to order additional bandwidth from the LEC to support the transition efforts. This may cause additional costs for the transition effort.

Once the LEC facilities are in place, the transition can occur via a flash cut of services. Independent of the option chosen, Qwest will build the on-net numbering plan into the Qwest systems prior to the transition.

***3.7.1.4 Process And Procedure For 100 Percent Fall-Back To Incumbent If Service Does Not Pass End-To-End Verification Testing***

There are three options to physically cut the service from incumbent to Qwest:

• Parallel Cutover

- Flash PBX Port Cutover

- CFA Hot Cut

**Parallel Cutover:** In this scenario, the restoration of service back to the original configuration could be accomplished by a software change commanding the PBX/Centrex that redirects the calls back to the original trunk group.

**Flash PBX Port Cutover:** This option can also quickly revert to the old configuration if the transition is not successful. While no change would be required in the PBX since the original port is being reused, a cross-connect back from the PBX port to the original SED would have to be made. For a Centrex service, the provider of the Centrex service would have to perform the reconnect to the original trunk group.

**CFA Hot Cut:** The CFA Hot Cut is the riskiest alternative. This process requires a Transfer of Use document to reflect the reuse of the local loop facilities. This is required if there are no spare LEC facilities terminating at a customer premise and a LEC build out would take excessive time.

Close coordination is required throughout this process. ███████ ████████████████████████████████████████ will be on a phone bridge while the ████████████████ changes the cross connects from the incumbent network to the Qwest network while a concurrent change is made at the PBX site connecting the PBX to the new SED device. If the service was not functioning properly, and a fallback was necessary, reconnection to the original service would be required at both the PBX/Centrex and the LEC.

### 3.7.1.4.1 Process to Transition Voice Service with Switched Access

For existing Plain Old Telephone (POTs) lines, the process for switched outbound LD service consists of adding Automatic Numbering Identification (ANIs) to the Qwest LD switching, OSS and billing systems. The

ANIs should be provided by the Agency as part of the transition order to ensure the correct ANIs are recorded by Qwest.

If the customer is ordering new POTs access lines and at the same time requesting Qwest LD for the new lines, the customers should request carrier identification code (CIC) 0432 as the primary interchange carrier (PIC). The customer will then communicate the new ANIs to Qwest to add to the customer account.

### 3.7.1.4.2 Procedure for Switching the Customer ANIs Away from Another IXC to Qwest LD

The customer must submit in writing the list of ANIs to change to Qwest. The form will be provided to the customer, and will include language ensuring the customer is giving permission to Qwest to change their PIC on their behalf.

The list of ANIs to move from an existing IXC to Qwest will be added to the customer's account and an outbound CARE message will be sent to the serving LEC requesting a PIC change to the Qwest CIC (0432).

The ILECs usually will process a POTs line PIC change within 24 hours of the request. Complex local access services (for example, PRI) may take up to three days.

The serving ILEC will normally return an industry standard CARE transaction code advising of the success or failure of the PIC change request. Failures are known as CARE rejects and are reworked by the Qwest Switched LD provisioning team.

The most common CARE reject is transaction code 2166 which indicates that a LEC "PIC freeze" is on the ANI and the LEC will not allow an IXC requested PIC change. When "PIC freezes" are encountered, the Switched LD provisioning team will take the following action:

Contact the serving LEC and advise them of the written request from the customer to change their PIC. In some cases, the serving LEC will manually change the PIC (manually overriding the PIC freeze) if Qwest can provide the name of the requestor. Qwest will provide the requestor's name to the LEC.

If the serving LEC will not take the request from Qwest LD, Qwest will advise the customer of the PIC change failure and advise the customer to call their LEC directly.

Remaining CARE rejects are reworked by the Qwest LD Switched provisioners. Their procedure(s) ensures moving the customer's LD traffic as quickly as possible to Qwest LD.

## 3.7.2 Toll-Free Service

Qwest® Domestic Toll-Free service (TFS) is a technologically advanced offering helping Agencies maintain close contact with the citizens. TFS provides a cost-effective method for citizens to access and communicate with the Agencies. Qwest TFS offers standard or custom toll-free packages that allow Agencies to maximize customer satisfaction and Department efficiency. These competitive products are easily configured using either switched or dedicated access. Value is maximized with the simple integration of other Qwest voice and IP products and services to give customers a wide variety of solutions appropriate to their current and future needs.

Based on the information provided in Table J.7 of the solicitation Qwest has developed a transition plan for TFS to accommodate the cutover ███████████████ dedicated access loops per month for an 18-month period. With the information provided, it is difficult to determine the number of toll-free numbers associated with switched access that would have to be transitioned.

### 3.7.2.1 Site Preparation Requirements

To complete the installation of the equipment, the following site preparation must be completed:

- Dedicated 120VAC, 15amp IG (isolated ground) circuit/receptacle including separate equipment ground wire per cabinet

- Plywood backboard mounted on the wall, with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable and if a new backboard is necessary

- Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent - 65 percent relative humidity, non-condensing

### 3.7.2.2 Activities Required to Complete Cutover of Service

Each transition includes activities that must be accomplished by the Qwest Team, Agency, GSA, LGC, and the incumbent contractor ███████ ██ is a WBS that lists all activities required for transition of Qwest TFS. ██████████████████████████████████████████████████ ████████████████████████████████████████ For each transition, the Qwest Team will customize the activities listed within this WBS in partnership with the affected stakeholders to incorporate any special requirements that may exist.

### 3.7.2.3 Arrangements Needed To Achieve Interconnectivity Between Incumbent Provider Network And Qwest During Transition Of Service

To accommodate a seamless transition from the incumbent provider to the Qwest network, the following process will be followed:

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### *3.7.2.4 Process And Procedure For 100 Percent Fall-Back To Incumbent If Service Does Not Pass End-To-End Verification Testing*

If the customer would like to first provision one number to allow them to do end-to-end verification testing, they can enter all 8XX numbers and schedule the turn-up at two separate times. The customer may first turn up and accept their test number and at a later coordinated turn-up date, accept the remainder of the numbers. The plan outlined above does not move traffic to Qwest routing until the service is tested and accepted. If service is never accepted, orders would need to be cancelled and the 8XX numbers ported back to the previous carrier.

### 3.7.3 Asynchronous Transfer Mode Service

Qwest Asynchronous Transfer Mode (ATM) is a powerful broadband, network transport product that provides a very high-speed, efficient way to electronically move large quantities of information over a highly reliable, scalable, secure network with inherent Quality of Service (QoS) guarantees. ATM Service uses logical connections that support the different ATM service categories:

- Constant Bit Rate (CBR)
- Variable Bit Rate real-time (VBRrt)
- Variable Bit Rate non-real-time (VBRnrt)

- Unspecified Bit Rate (UBR)

ATM Service uses high-speed ATM networking technology to bundle information into fixed segments, called cells. ATM is based on industry standards governed by the ATM Forum, which is now part of the new MFA Forum. MFA Forum is a combined entity of the Multi-Protocol Label Switching (MPLS) and Frame Relay Alliance plus the ATM Forum. The ATM protocol is designed to support many different business applications within an enterprise network, treating each business application based on its bandwidth and QoS needs. ATM Service supports speeds from T-1 through OC-12.

ATM Service requires the use of customer or Qwest-provided Service Enabling Devices (SEDs) that put customer data into cells suitable for transmission over the Qwest ATM network.

Based on the information provided in Table J.7 of the solicitation, Qwest has developed a transition plan for ATM to accommodate the cutover of ███████████████████████ Permanent Virtual Circuits (PVCs) per month over an 18-month period.

### 3.7.3.1 Site Preparation Requirements

1. Obtain accurate site information including:

- Location and site profile (for example, key contact information, physical and shipping address)
- Access information (badge, escort, and visiting hours)

2. Work with the LGCs to inventory site information including:

- Site locations (network end-points and computer rooms, for example, MDF and IDF)
- Facility infrastructure and topology
- Floor plans and rack/cabinet layouts
- Circuit and demarc inventory

- Equipment inventory

3. Work with the Agency to select one of the following three options for each location:

- Install a new SED. If this option is selected, then the site must meet the following requirements prior to the transition:
  - Dedicated 120VAC, 15amp isolated ground circuit/receptacle, including separate equipment ground wire per cabinet. Often there is adequate space on an existing rack to support the SED. If not, additional racks will be provided
  - Plywood backboard mounted on the wall with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable and a new backboard is not necessary
  - Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent - 65 percent relative humidity, non-condensing
- Use a spare WAN port on the existing SED
- Reuse the existing WAN port if the above options are not available.

### 3.7.3.2 Activities Required To Complete Cutover Of Service

Each transition includes activities that must be accomplished by the Qwest Team, the Agency, GSA, the LGC, and the incumbent contractor. ███████████ is a WBS that lists activities required for transition of ATM services. ████████████████████████████████████████████████ ████████████████████████████████████████████████ ███████████ For each transition, the Qwest Team will customize the activities listed within this WBS in partnership with the affected stakeholders to incorporate any special requirements that may exist.

[Table content redacted]

### 3.7.3.2.1 Network Design (if required)

Required steps include:

1. Coordinate with the Agency to understand and determine current network topology and future requirements

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2. Perform detailed design of the new network and NNIs

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3. Conduct lab testing and network simulations to validate the proposed design

4. Coordinate a field trial with the Agency to verify performance. Order pilot connections

### 3.7.3.2.2 Transition Cutover

Required steps include:

1. Jointly and collaboratively develop an Agency-specific ALTP or TPSP with the Agency

2. Establish ATM NNI connections with incumbent provider

3. Install equipment and establish new connectivity to sites per the detailed transition plans

The following diagrams illustrate the different stages of a transition cutover for a typical large-scale network ████████████████████████████ This cutover plan maintains service continuity during the transition period and also minimizes the cost of the transition. Only a limited number of sites are shown due to space limitations. Figures include:

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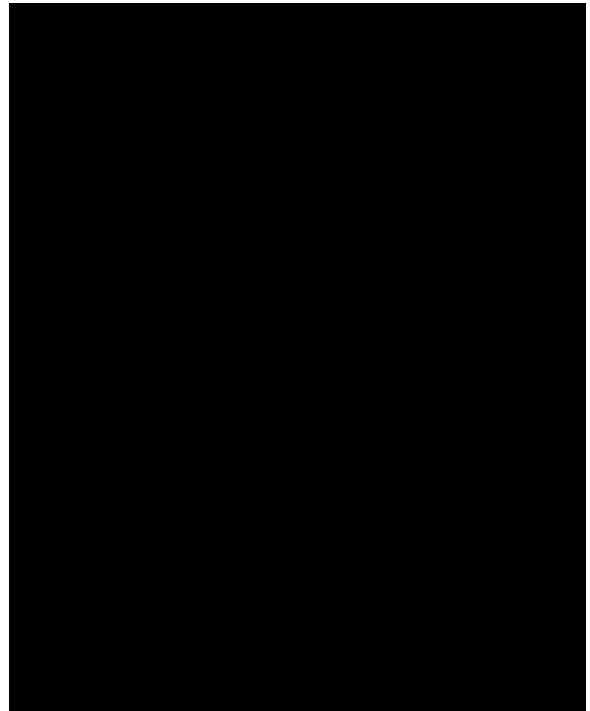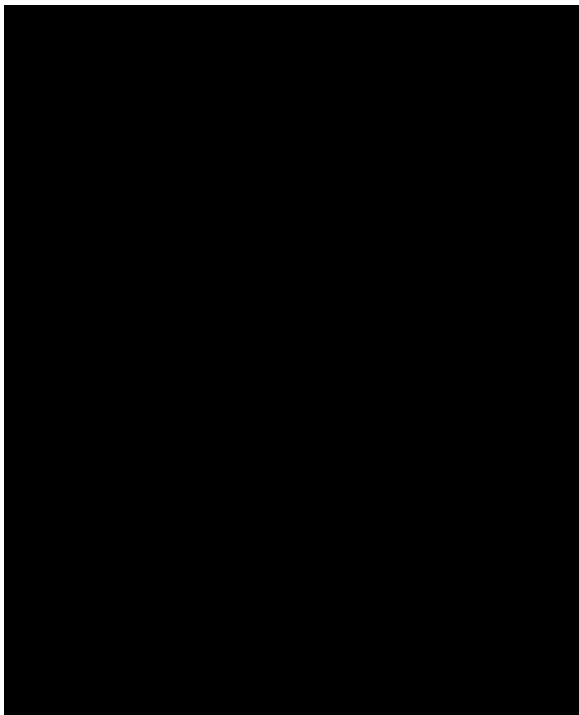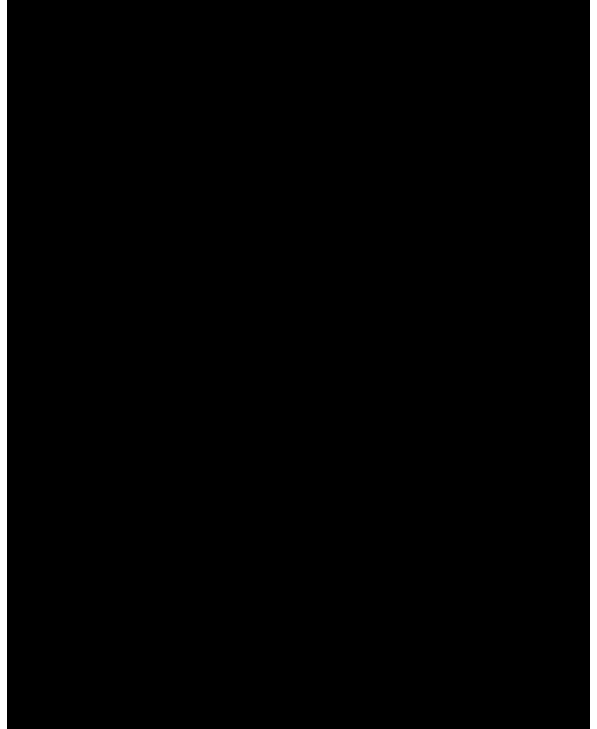
### 3.7.3.1 Arrangements Needed To Achieve Interconnectivity Between Incumbent Provider Network And Qwest During Transition Of Service

Required steps include:

1. Finalize sites, connection type, size, and quantity with incumbent provider

2. Negotiate ATM NNI configurations:

3. Install and test NNI connections

### 3.7.3.2 Process And Procedure For 100 Percent Fall-Back To Incumbent If Service Does Not Pass End-To-End Verification Testing

Required steps for sites with new circuits provisioned to Qwest:

1. Capture SED configuration prior to the site transition

2. Leave the old physical circuit and its PVCs from the incumbent side intact until the new circuit and its PVCs from the Qwest side have passed End-To-End (E2E) verification testing

3. If the redirected service over the Qwest network does not pass E2E verification testing, then roll back the SED configuration

Required steps for sites with circuits requiring hot cut to Qwest:

1. Capture SED configuration prior to the site transition

2. Leave the PVCs from the incumbent side intact until the circuit has been hot cut successfully to the Qwest side and service has passed E2E verification testing

3. If the redirected service over the Qwest network does not pass E2E verification testing, then roll back the SED configuration and move the access circuit back to the incumbent network

If issues are encountered during the transition, Qwest will work with the Agency and incumbent provider immediately to troubleshoot and resolve the issues.

## 3.7.4 Network-Based IP VPN Service

Qwest Network-Based IP VPN (NBIP-VPN) is a new suite of wide area networking services that powers customers' business operations on our application-aware network. Qwest NBIP-VPN offers a converged networking service based on leading technologies that allow Government customers to build choice networks using IP-centric, MPLS-based solutions. Qwest IP/MPLS Network is tuned to Agency applications. Not only does Qwest IP/MPLS Network provide superior technology and universal access, it offers service and support on the Agency's terms. Qwest's NBIP-VPN provides secure, reliable transport of an Agency's applications across Qwest's high-speed unified multi-service IP-enabled backbone infrastructure.

Based on the information in Section J.7, Qwest is prepared to transition ▓▓▓▓▓▓▓▓▓▓ sites in 18-months.

### 3.7.4.1 Site Preparation Requirements

Required steps include:

1. Obtain accurate site information:

2. Work with Agency site contacts to inventory the sites:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. Work with Agency to select one of the following three options for each location:

- Install a new SED. If this option is selected, then make sure the site can meet the following requirements prior to the transition:
  - Dedicated 120VAC, 15amp isolated ground circuit/receptacle, including separate equipment ground wire per cabinet. Often there is adequate space on an existing rack to support the SED. If not, additional racks will be provided.
  - Plywood backboard mounted on the wall with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable and if a new backboard is necessary.
  - Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent – 65 percent relative humidity, non-condensing.
- Use a spare WAN port on existing SED
- Reuse existing WAN port if the above options are not available.
- Activities Required to Complete Cutover of Service [REDACTED]

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[table redacted]

## Network Design

Required steps include:

1. Work with Agency to understand current network topology and future requirements:

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2. Perform detailed design of the new network and private peering points:

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3. Conduct lab testing and network simulations to validate the proposed design

4. Coordinate a field trial with GSA to verify performance. Need to order pilot connections

**Transition Cutover**

Required steps include:

1. Jointly develop an ALTP or TPSP with Agency

2. Establish private peering points with incumbent provider

3. Install equipment and establish new connectivity to sites per the detailed transition plans

### 3.7.4.2 Arrangements Needed To Achieve Interconnectivity Between Incumbent Provider Network And Qwest During Transition Of Service

Required steps include:

1. Finalize private peering sites, connection type, size, and quantity with incumbent provider

- Exchange peering configuration information:

- Install and test peering connections

### 3.7.4.3 Process And Procedure For 100 Percent Fall-Back To Incumbent If Service Does Not Pass End-To-End Verification Testing

Required steps for sites with new circuits provisioned to Qwest:

1. Capture SED configuration prior to the site transition

2. If the redirected service over the Qwest network does not pass E2E verification testing, then roll back the SED configuration

Required steps for sites with circuits require hot cut to Qwest:

1. Capture SED configuration prior to the site transition

2. If the redirected service over the Qwest network does not pass E2E verification testing, then roll back the SED configuration and move the access circuit back to the incumbent network

If issues are encountered during the transition, Qwest will work with GSA and the incumbent provider immediately to troubleshoot and resolve the issues.

### 3.7.5 Voice Over IP Transport Service

Qwest's Voice ▋▋▋ Internet Protocol Transport Service (VoIPTS) integrates local and long-distance voice with IP access on a single connection. It uses Voice over IP (VoIP) technology to give customers the advantage of using the entire circuit for Internet access when phones are not in use. ▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋

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▋▋▋▋ Voice traffic is converted to IP and carried across the Qwest IP backbone to a Qwest VoIP gateway nearest the final destination of the call. The traffic is then converted from the IP format to the Time Division Multiplexing (TDM) accepted by the terminating local service provider and then delivered to the desired location.

Based on volumes in Section J.7, Qwest is prepared to transition ▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋▋ traffic monthly to our IP backbone.

### 3.7.5.1 Site Preparation Requirements

Site preparation is required to support the Integrated Access Device (IAD), the necessary SED, which will be provided by Qwest. No additional equipment will be required on the part of end users who currently have VoIP Key or PBX systems deployed.

Required steps include:

1. Obtain accurate site information:

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2. Work with Agency site contacts to inventory the sites:

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3. Work with Agency to select one of the following three options for each location:

- Install a new SED. If this option is selected, then make sure the site can meet the following requirements prior to the transition:
  – Dedicated 120VAC, 15amp IG (isolated ground) circuit/receptacle, including separate equipment ground wire per cabinet. Often there is adequate space on an existing rack to support the SED. If not, additional racks will be provided.
  – Plywood backboard mounted on the wall, with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable and if a new backboard is necessary.
  – Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent – 65 percent relative humidity, non-condensing.
- Use a spare WAN port on existing SED
- Reuse existing WAN port if the above options are not available

**911 Emergency Services Management:** Emergency 911 support involves ensuring that a person who places a 911 call is properly identified and that the call gets routed to the correct Public Safety Answering Point (PSAP) location via a Class 5 or soft-switch facility. The PSAP Automatic

Location Identification (ALI) database contains phone numbers for the geographic region it serves.

The numbers provided by the VoIPTS are not registered in the ALI database, and hence when 911 calls are made, calling party address will not be provided. Therefore, basic 911 services would apply and the call would be transferred to a PSAP 911 operator.

**911 Activation Requirements:** 911 calls will be translated to the E.164 number for the PSAP servicing the customer and routed through the PSTN. The PSAP is the answering location for 911 calls originating within a specified area. The PSAP is also responsible for answering 911 calls and either dispatching an emergency response under its direction, or transferring the call to the appropriate PSAP or emergency responder. These values are important to support 911 on a VoIP enabled phone.

### 3.7.5.2 Activities Required to Complete Cutover of Service

Each transition includes activities that must be accomplished by the Qwest Team, Agency, GSA, LGC, and the incumbent contractor. █████████ ██ is a work breakdown structure (WBS) that lists all activities required for transition of VoIPTS. ██████████████████████████████████████████ ████████████████████████████████████████████████████████████████ ████████████ For each transition, the Qwest Team will customize the activities listed within this WBS in partnership with the affected stakeholders to incorporate any special requirements that may exist.

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[REDACTED]

[REDACTED]

[REDACTED]

Project execution will begin with the placement of network and equipment orders. Identified site-specific responsibilities will be started and completed. Coordination of network and equipment delivery will take place for each phase and each site. Network and equipment testing will be conducted. Upon successful testing for each phase, training at the specific sites in that phase will occur prior to cutover.

**Cutover:** Throughout each phase prior to actual cutover, the Transition Coordinator will schedule pre-cut meetings with the appropriate resources, including the customer local contact. The cutover plan will identify the maintenance window or time the cut should occur, on- and off-site support needed to facilitate the cut activity, as well as a contingency plan in the event that service needs to be restored.

**Cutover Approach:** In preparation for the cutover, Qwest will pre-test and loop-back the circuit in the customer equipment rooms at all locations.

Qwest encourages customer participation in pre-testing, where feasible. Potential technical problems can be identified and resolved prior to the official cutover by pre-testing the new Qwest circuits, and new or reconfigured customer SEDs.

[REDACTED]

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### *3.7.5.3 Arrangements Needed To Achieve Interconnectivity Between Incumbent Provider Network And Qwest During Transition Of Service*

Interconnectivity with the incumbent provider is satisfied through both the peering relationships on the IP side and through the PSTN on the voice side.

### *3.7.5.4 Process And Procedure For 100 Percent Fall-Back To Incumbent If Service Does Not Pass End-To-End Verification Testing*

If the data migration is not successful, the Qwest Implementation group will follow the trouble through to resolution. To ensure that any scheduled number porting will not be impacted, the Qwest Implementation group will contact Qwest's vendor to cancel the pending Local Number Porting (LNP) order. In situations where porting has occurred, but service needs to fall back to the incumbent, the Qwest Implementation group will initiate the "snap back" process with the vendor to reverse the number porting action.

If routers or PBX programming have been reconfigured, the previous configurations will need to be restored by the customer technical support.

### 3.7.6 IP Telephony Service

The Qwest IP Telephony Service (IPTelS) is an IP application that provides real-time, two-way voice capability in IP over a broadband connection. Qwest IPTelS offers a fully-hosted service that replaces the need

for a premises-based phone system and the multiple vendors required to provide popular applications like voice mail and integrated messaging. The features and applications are delivered to a customer's handset via a single dedicated Internet access pipe. These features can be individually customized by the user through a personalized Web portal. For the Agency, this solution provides centralized management and control, allowing the Agency administrator to perform Moves, Adds, and Changes (MACs) from an Internet connection.

This solution is hosted on Qwest's carrier-grade network, not the Internet. The applications were built with a browser-based model in mind, making it easy for the Agency to administer, manage and update their features (such as speed dial keys, handset templates and MACs). Therefore, a private branch exchange (PBX) is no longer needed, only phones. Qwest IPTelS gives Agencies the same voice quality to which they are accustomed with their own PBX, unlike other VoIP solutions that may transport voice traffic over the Internet.

Qwest's IPTelS requires Dedicated Internet Access (DIA) with QoS, a certified voice router, and IP handsets. To support the Agency, Qwest's IPTelS has four seat types available:

- IAFXS for customers with a Key System
- IAFXS_VM for customers with a Key System (with Voicemail)
- IAPRI for customers with a PBX System
- IAPRI_VM for customers with a PBX System (with Voicemail)

There are over 35 IPTelS features available to Agencies. The following features come standard with the IPTelS:

- On-Site Installation
- Office Administrator Portal Account Profile and Related On-Site Training

- Unlimited Local and 8XX Outbound Calling

- Enhanced 911

- Free On-net Calling

- Business White/Yellow Pages listed on main TN

- Usage Based Functionality (for example, per occurrence charges for Directory Assistance, Operator Service, and International calls)

- 24x7x365 customer support

- DIA Transport and Local Loop

### 3.7.6.1 Site Preparation Requirements

**Site Certification:** Certification of the customer facility is important to properly deploy the VoIP solution. The Agency representative's approval (along with GSA concurrence) on the implementation plan serves as acknowledgement of site "readiness" for VoIP deployment. The certification check sheet is reflected below:

| Requirement | Status |
|---|---|
| CAT5 support to all specified VoIP workspaces? | |
| Sufficient power outlets for specified VoIP workspaces? | |

**Required Hardware:** Listed below is a summary of hardware and accessories that are required for successful installation of the VoIP solution. Existing hardware in the customer's network may be utilized and would be defined within the network diagram.

| Function | Model | Quantity |
|---|---|---|
| Router | | |
| E-30 | | |
| Switch | | |
| VoIP Phone | | |
| Accessories | | |
| Ethernet Cables | | |
| Accessory Switches | | |

## Bandwidth Requirements

| | |
|---|---|
| **Does the installation require Voice and Data/Internet shared on the new circuit?** | Yes or No |
| **Do all participants in VoIP require Data/Internet at the workspace?** | Yes or No |
| **Will data migration take place at the time of Voice installation?** | Yes or No |

This table captures the bandwidth requirements needed for either the voice or data, or combined data requirements. A blank field for data equates to a voice only installation on a dedicated circuit.

| Utilization | Bandwidth Requirement (kbps) |
|---|---|
| Voice | |
| Data | |
| **Combined Total (if required)** | |

**Toll Free Numbers:** Many customers prefer the continued use of toll-free numbers for logical reasons. The table below defines the function of the toll-free number, and the process of managing a seamless transition of the phone number to the VoIP solution.

| Toll Free Number Function | Toll Free Number | Toll Free Translation Number | LNP to Tenant? | Identify Bridged Line Appearances if Required |
|---|---|---|---|---|
| | | | | |

**POTS Phone Numbers:** Many customers prefer the continued use of their POTS numbers. The table below defines the process of managing a seamless transition of the POTS to the VoIP service.

| Phone Number | Will Customer Initiate Remote Call Forwarding Service with Existing Service Provider? | LNP Phone Number to Tenant? | Identify Bridged Line Appearances if Required | Destination of Number (Phone Number or Text Description) |
|---|---|---|---|---|
| | | | | |

**VoIP Phone Numbers:** This table defines the NPA-NXX to be used for the VoIP service. If the requested NPA-NXX is not available, then another NPA-NXX will be provided from the same rate center. The number ranges should reflect the Agency's immediate and mid-term business needs, allowing for potential growth.

| Current NPA-NXX | Available NPA-NXX | Quantity or Complete Range of Phone Numbers Required |
|---|---|---|
| | | |

**Requested Extensions:** This table defines the preference of 4- or 5-digit dialing (5-digit dialing is recommended); currently, 3-digit dialing is unavailable. Extensions should not begin with zero. By default, the extension format used is four digits, representing the last four numbers of the associated VoIP phone number.

| Extension Format Requested (4- or 5- digit ) | Extension Range |
|---|---|
| | |

**User and VoIP Feature Assignments:** This table defines the user information that is required to populate the office administrator tenant for the VoIP service.

| First Name | Last Name | E-mail | Phone Model Assigned | Feature Package Required |
|---|---|---|---|---|
| | | | | |
| | | | | |

**Common Area Phones:** This table defines the phone locations and phone numbers that are not deployed in personal employee workspace areas. This includes conference rooms, printer, lobby, and empty workspace areas. These areas commonly have calling restrictions and should be defined in the Feature Packages section of the table.

| Phone Location | Phone Model Assigned | Feature Package Required |
|---|---|---|
|  |  |  |

**Automated Attendant:** The Automated Attendant supports logical call management during business hours, or after hours for improved call handling efficiency and customer satisfaction. The client should provide detailed information regarding the call handling expectations for business and non-business hours of operation, and departmental expectations. This ideally should be defined by use of a flow chart diagram. The default Automated Attendant shown in *Figure A7-48* will be used if specific information is not available.

**Figure A7-48. Automated Attendant**
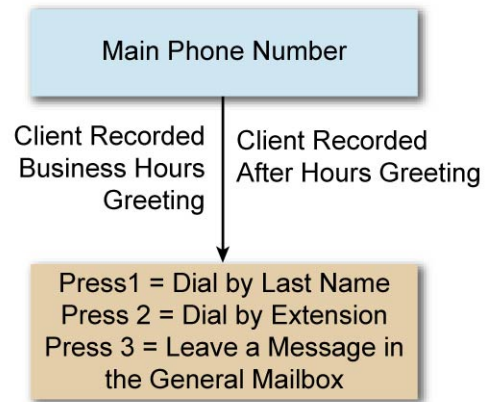


Browsers supported include:

- On Windows platforms, Internet Explorer 5.5 and higher and/or Netscape 6.2
- On the MAC Operating System, version 10.1.3 or 9.2.2 running Internet Explorer 5.1 and/or Netscape 6.2
- All computers used for Office Administrator (OA) Portal access should be upgraded to the versions stated above or higher

**911 Emergency Services Management:** Emergency 911 support involves ensuring that a person who places a 911 call is properly identified and that the call gets routed to the correct PSAP location via a Class 5 or soft-switch facility. The PSAP Automatic Location Identification (ALI) database contains phone numbers for the geographic region it serves.

The numbers provided by the IPTelS are not registered in the ALI database, and hence when 911 calls are made, calling party address will not be provided. Therefore, basic 911 services would apply and the call would be transferred to a PSAP 911 operator.

**911 Activation Requirements:** 911 calls will be translated to the E.164 number for the PSAP servicing the customer and routed through the PSTN. PSAP is short for Public Safety Answering Point. It is the answering location for 911 calls originating within a specified area. The PSAP is also responsible for answering 911 calls and either dispatching an emergency response under its direction, or transferring the call to the appropriate PSAP

or emergency responder. These values are important to support 911 on a VoIP enabled phone.

| PSAP Phone Number | POTS Phone Number Supplied | LAN Subnet Mask |
|---|---|---|
|  |  |  |

The volumes in Section J.7 indicate there is no service in Year One. Fifty per cent of the volume for Year Two is 3200 subscribers and one administrator per month with growth in the out years.

### 3.7.6.2 Activities Required To Complete Cutover Of Service

Each transition includes activities that must be accomplished by the Qwest Team, Agency, GSA, LGC, and the incumbent contractor. ■■■■■
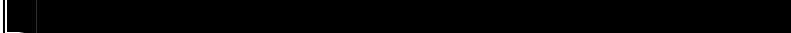
Coordination between the following Qwest organizations █████████ ██ is necessary for the successful installation, testing, and activation of the Qwest IPTelS.

**Figure A7-50. Qwest Coordination**

| | Test and Turn Up Role |
|---|---|
| | █████████████████████ ████████████████ |
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**Activation Day – Installation and Training:** The activation of the Qwest IPTelS orders begins with the field technician arriving on site, installing the IAD/router, and contacting IP Implementation to test DIA connectivity. The field technician then installs each of the IPTelS handsets and verifies all

phones are active on the IPTelS network and the customer is properly configured in ████████████████████████████████████████████████ .

The following test calls (on either assigned or temporary test numbers) are to be performed from the customer's handsets or a technician's butt set:

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After IPTelS testing is complete, the field technician provides training to the Agency's designated office administrator (OA) on the IPTelS OA portal, and verifies the customer has the 24x7x365 support number.

**Activation Day – Number Porting:** For Agencies who are porting their numbers, a second day of service activation (approximately 72 hours after the initial installation) is necessary to complete the porting. On this last day of activation, no field technician is required. The incumbent carrier executes the porting on the scheduled FOC date. The next day, Qwest verifies porting success by calling the ported numbers.

If porting is successful, Qwest manually closes the appropriate job step. Qwest initiates the update to activate the status of the assigned and ported telephone numbers. This process will then automatically trigger the

SOCN, which will be sent to the Agency representative and auto-fed into the Qwest Control Networx Portal. The Agency's acceptance of service is then verified.

### 3.7.6.3 Arrangements Needed To Achieve Interconnectivity Between Incumbent Provider Network And Qwest During Transition Of Service

Interconnection between systems would be accomplished using an IP network interconnected at the customer premises. Qwest can support conversion of a TDM-based voice trunk into IPTelS via a gateway device such as our IPTelS Integrated Access SED.

### 3.7.6.4 Process And Procedure For 100 Percent Fall-Back To Incumbent If Service Does Not Pass End-To-End Verification Testing

- If a new SED is ordered with a new loop, this event will not be service impacting
- If routers or PBX programming have been reconfigured, the previous configurations will need to be restored by the Agency technical support

## 3.7.7 Managed Network Service

Qwest's Managed Network Service (MNS) is a complete network management offering that can be used to build a new customer network and manage it or to take over the management of an existing network. Included in the standard service are 24x7x365 days a year monitoring of equipment and transport links, complete fault and performance management, complete

network analysis, configuration backup, online reports, and total customer support.

Qwest currently manages devices on six continents. MNS can be bundled with Qwest transport, equipment, and maintenance packages, or offered as a stand-alone network management solution.

To provide Qwest MNS services, Qwest uses a Simple Network Management Protocol (SNMP)-enabled proactive management service with the ability to store and retrieve historical data from devices located worldwide. The service is provided by the highly trained engineering staff at the Qwest NOC ██████████████████████████ Qwest has the capability and knowledge to effectively manage any Networx MNS requirement.

Based on the information provided in Table J.7 of the solicitation, Qwest has developed a transition plan for MNS to accommodate the cutover of ██████████ sites per month for an 18-month period.

### 3.7.7.1 Site Preparation Requirements

In order for Qwest MNS to manage an Agency network, the network should meet the following criteria:

- An IP (Internet Protocol) capable routed network using publicly-routable IP addresses or privately-routable IP addresses (RFC 1918) for all covered devices.

- Agencies using addresses from the pool of private addresses may be required to implement loop-back interfaces or network address translation (NAT).

- The Agency network can have protocols other than IP running on it. Qwest does not report on traffic patterns by Layer 3 protocol, but will support networks running network layer protocols other than IP (as long as IP is included). Qwest uses IP for its network management traffic, so the network must be capable of routing IP traffic.

- Includes only Qwest-approved devices with SNMP activated.
- The devices have been approved for management by Qwest MNS or provided to Qwest for certification testing.

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All devices to be managed by Qwest must be certified or approved in advance by Qwest MNS Product Management. If an Agency device is not currently certified, Qwest MNS will certify new devices. Within 24 hours, the Agency will receive the MNS Team's initial assessment of the manageability of the device and information about any certification efforts already underway.

For SED installations, the Agency must provide a safe and secured location in which to place it. The room environmentals must meet equipment manufacturers' specifications (this will be determined during the planning process). In addition, the electrical requirements must be determined during the planning process. Site access, security, and LGC information must also be provided to the Transition Manager for scheduling (especially in a 24x7x365 maintenance arrangement).

### 3.7.7.2 Activities Required to Complete Cutover of Service

Each transition includes activities that must be accomplished by the Qwest Team, Agency, GSA, LGC, and the incumbent contractor. ████████ ██ lists all activities required for transition of MNS services. ████████

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