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Item	Description	Provider Managed	Agency Managed
1	911	Automated Procedure: o E911 services are tied to the LAN switch port designated for VoIP. It will be the provider's responsibility to program and monitor the designated ports, implement change management processes to assure accuracy of E911 data and transmit to PSAP via daily updates. This is required to dispatch emergency responders to the correct location. New Standard Required: o State will need to develop standard on 911 Quadrants Schema. o The Schemas will be implemented by the provider.	New Manual Procedure: o State will need to establish a change management process and make sure it is followed by the agency and service provider. Utilizing manual procedure will impede the provider's capability to assure LAN switch is configured correctly and maintained correctly for E911 VoIP. New Standard Required: o State will need to develop standard on 911 Quadrants Schema. o The Schemas will need to be implemented by state agency resources.
2	Cost Management & Monitoring	o Management=$0 o View Access for trouble shooting included in the Network Services Standard Seat pricing regardless if the State opts in or out.	o Management= Varies by agency, includes current FTE support for switch management. Not all agencies have switch management staff at this time. However, if switch configuration is required, additional FTEs may have to be secured or existing FTEs trained by the agency for VOIP and VLAN. o Monitoring= Varies by agency, not all agencies have network monitoring tools at this time. Agencies with a network monitoring tool may have an annual maintenance expense. o Monitoring tools can be purchased

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			off of other state contracts. o In a case of trouble resolution on the VOIP network and the provider's ability to isolate the problem, view access has to be granted to the provider staff and all agencies identified issues resolved before provider is dispatched.
3	Converged Network	Contract Requirements: o To combine Voice and Data on same LAN switch and utilize current infrastructure. To reduce cost of equipment, transports and environmental overhead. Service Level Requirements: o Identified under the contract with financial penalties to ensure compliance.	o Contract requirement may not be met, as a number of manual procedures will need to be identified to support this requirement and related Service Level Requirements. o Service Level Requirements: some agencies may opt to install a separate LAN switch to support VoIP. This will increase the cost to the agency. If dual switches are required the 2nd switch will be out of scope for this contract. o Additional infrastructure (cabling, power, etc.) for the 2nd switch may be required. New Standard Required: o State will need to develop standards and additional governance (i.e., PIJ with lower threshold to control the switch acquisitions).
4	Device Management & Visibility	o Service Provider will have full management and control of the LAN switches.	Varies by Agency: o Agencies with switch management staff would retain full management,

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		o Agency support personnel will be limited to view access only. Develop new Change Control Procedure to include VOIP devices and switches: o All Voice and Network changes impacting the in-scope devices will need to follow a Change Control Procedure	control and visibility into network for troubleshooting problems. o May increase agency's level of effort and support cost. o Special VLAN configurations will be required to support the VOIP enabled sites o Providers support personnel will need to granted view access for trouble isolation and Network seat confirmation. o Agencies without switch management staff: will need to secure either internal or external resource to perform the duties above.
5	Desktop Security	o Encryption software is not in scope of the contract. o Providers support personnel pass background check as required by state.	o For agencies that require encryption at the enterprise level, the encryption software to the desktops or at application level may be required. o This would be additional cost to the agencies that require encryption on desktops.
6	Equipment Refresh Planning	o LAN refresh is included in AZNet II regardless of LAN Management in or out. o Managed LAN solution can proactively report on EOL LAN switches, which will be required to plan refresh schedules.	o LAN Refresh Only Option was included in AZNet II, since no proactive equipment replacement strategy. o Some agencies have conservative amount of spare stock to replace in-service failures. o Majority of the agency do not carry maintenance on their LAN switches since, some manufacturer of the existing switches have a lifetime

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			warranty.
7	General Problem Isolation	o One provider will be responsible for problem isolation o Agency IT staff will have a single helpdesk contact for resolving issues all the way to the Switch port that connects the agency managed devices, I.e. PCs.	o Multiple IT teams will need to be engage for problem isolation, analyzing LAN and WAN. o VoIP services repairs for the phones can not start until LAN is deemed working.
8	General Service Level Requirements (SLR) at Risk	o One provider responsible for the SLR as specified in the AZNet II contract. o Under AZNet II, the Service Provider will dispatch technicians from Phoenix Metro, Tucson, and Flagstaff locations only, which may impact overall response times and service levels. However the Service Provider is contractually bound and is subject to a financial penalty for missed SLAs. o Port activation can be performed remotely as priority ticket such as password resets are done today.	o Multiple IT teams have to be engaged. o In most cases, in-house FTEs are dispatched to remote locations. o Larger agencies may be able to respond quickly since they may have staff located on-site or within a relative close proximately in metro areas. o No SLRs in place for work being performed by the agency IT teams and no penalty due to missed SLRs.
9	Shared Voice SLR	o By managing all devices to the hand sets, the provider will be responsible to guarantee Voice quality of Service (QOS) o There is specific voice QOS SLR in the AZNet II contract to guarantee providers compliance. Develop new Change Control Procedure to include VOIP devices and switches: o All Voice and Network changes impacting the in-scope devices will need	o Changes to LAN can negatively impact shared voice between the handset and WAN. o Any software upgrade performed by the agency will need to be tested by the provider to confirm conflict free enterprise. o Manual procedure will need to be established to update the providers inventory systems resulting from MAC activity impacting VOIP seats.

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		to follow a Change Control Procedure.	<u>Develop new Change Control Procedure to include VOIP devices and switches:</u> ○ All Voice and Network changes impacting the in-scope devices will need to follow a Change Control Procedure.
10	Per Seat Billing	○ Precise utilization by switch port is captured to calculate Network seat for accurate billing. ○ View access to the switches can also accommodate the billing requirement.	○ To obtain network seat count, an estimating and manual validation process will have bee developed for seat billing. <u>New Manual procedure Required:</u> ○ The validation procedure requires participation from both Agency and Service provider staff. ○ View access has to be granted to help reduce the manual procedure.
11	Risk Management	○ Any loss of functionality as result of force majeure, theft or provider technician error will be covered by the provider for in-scope devices. ○ At this time the provider is stating that for Refresh only option the loss prevention will not be covered. If refresh only option is selected State Procurement will need to be engaged for further discussion with the provider. There is no specific language in the contract addressing this issue.	○ At this time the provider is stating that for Refresh only option the loss prevention will not be covered. If refresh only option is selected State Procurement will need to be engaged for further discussion with the provider. There is no specific language in the contract addressing this issue. ○ Any loss of functionality as result of force majeure, theft or agency technician error will need to be covered by the agency operating funds. ○ State Risk management will not cover

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			non state equipment.
12	Small Site Equipment Requirements	o Provider is responsible to engineer the refresh systems with collapsing and reducing the equipment require, this would result in costs saving for the provider as well as environmental cost savings for the agency.	o Maintaining a Dmarc between WAN and LAN management also requires a Dmarc between equipment and the supporting environmental driving total costs up.
13	Staffing (KSAs)	o Typically, outsourced service providers are skilled in the services they provide. o Knowledge transfer must occur on existing VLAN configurations between agency support personnel and the Service Provider.	o Not all agencies have Switch Management Staff. o For the agencies that have Switch management staff today, FTEs have historical knowledge of existing environment and are very familiar with existing VLAN configurations. Since LAN switch replacement will be included under the new contract, the Service Provider may opt to replace existing switches with a different model/manufacturer. As a result, training on the new switches may be required for agency support personnel. o Training can be either obtained on state contract or will be billable by the provider. o Agencies without switch management staff: will need to secure either internal or external resource to perform the duties above.
14	Version Control	o Would control a small subset of IOS that has been tested and proven risk free to work in the VoIP environment.	o Agency would responsible for IOS version and any issue that come with this in relation to VoIP.

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		o If bug is discovered from feature upgrade IOS can be updated in uniform. Cisco IOS (originally Internetwork Operating System) is software used on most Cisco Systems routers and current Cisco network switches. *(Earlier switches ran CatOS.)* IOS is a package of routing, switching, internetworking and telecommunications functions integrated into a multitasking operating system.	o Provider can mass communicate any bug fix alerts to the agencies IT teams to be implemented. If the work is then not performed, it would affect SLR. o Develop new Change Control Procedure to include VOIP devices and switches.
15	Vendor Maintenance	o Provider will be responsible for manufacturer maintenance and replacement program. o Spare equipment will be provided during the maintenance window.	o Agency will need de-install the equipment and coordinate through the provider to utilize manufacture maintenance and/ or replacement program. o Agency will need to secure spare equipment while damage equipment is shipped back to manufacturer for repair. o Spare equipment will NOT be supplied by the provider.
16	WAN Optimization Equipment	o Provider will need to work with impacted agencies to identify the SOW and a billing price to include these devices to the contract. o The amendment will need to be submitted to SPO for approval and to be added to the AZNet II contract.	o Agency will need to purchase and manage these devices as they will be out of scope.