ICSD FY16 E-RATE RFP REQUIREMENTS

03-16-2016

Ken Munford

REQUEST FOR PROPOSAL RFP # ICSD-PHASE2-YR16

RFP - The Iron County School District will accept sealed proposals from qualified firms/vendors to provide services necessary for installation and configuration of network equipment for the FY2016-17 (E-RATE) cycle. Bidders must have a Service Provider Identification Number (SPIN) and this SPIN must be included on the bid proposal. Those interested shall submit a signed cost proposal to the district on or before 12:00 PM local time, April 28, 2016 at the Iron School District Central Office, located at 2077 West Royal Hunte Dr, Cedar City, Utah, 84720.

Purpose

Proposals are being sought by the Iron County School District for the purpose of securing the most cost efficient way of upgrading the school district's instructional areas (*classrooms/labs/etc*.) with wireless capacity and network backbone bandwidth. We are also seeking Next Generation Firewall appliance(s) to implement at the district level as a border firewall.

General Requirements

The District will be looking for Cisco or equivalent network switches and Xirrus or equivalent wireless equipment for this project.

- Vendors who are responding to this RFP with Cisco or equivalent and Xirrus or equivalent network equipment must state their certifications.
- Vendors proposing Cisco equipment must have a minimum of one Cisco Certified Network Professional (CCNP) or equivalent who is employed full time by the proposing vendor.
- Vendors proposing Xirrus equipment must have a minimum of one Xirrus Certified (CWNP) or equivalent engineer(s) on staff, who is employed full time by the proposing vendor.
- Vendors proposing infrastructure cabling must have a minimum of one certified installer who can certify the cable installation at CAT6 standards and provide the required warranty.
- Proposed solutions must integrate with the existing network environment to ensure a seamless management and design. Contact ICSD Network Administrator for further details.
- Wireless management software must be able to successfully manage all current access point/arrays and newly installed access points/arrays from one management package/solution.
- It will be the responsibility of the bidder to check the RFP website daily for any changes to the RFP or listing of bidder questions and answers that may arise. http://tech.irondistrict.org/eRate

Terms used throughout this RFP

ICSD – Iron County School District

USAC – Universal Service Administrative Company

SPIN – Service Provider Identification Number

FCDL – Funding Commitment Decision Letter

FCC – Federal Communication Commission

SLD – School and Library District

USF - Universal Service Fund

All proposals and supporting documentation must be sent to: (*Submittal should be clearly labeled on the outside of the submittal)*

Iron County School District c/o Troy Lunt FY2015-2016 PHASE2 Project RFP # ICSD-PHASE2-YR18

Submittal should be addressed to: Iron County School District Monica Torres, Administrative Assistant, 2077 West Royal Hunte Dr. Cedar City, UT, 84720

CRITERIA FOR SELECTION

The District will utilize the following criteria (*as the basis for the proposal evaluations & selection*).

Factor	Weight
Price of the ELIGIBLE Equipment, Services & Warranties	25%
Integration of Preferred Products into existing environment	20%
Personnel Qualifications, Professionalism & Scope of Work	10%
Prior Experience with the District	15%
Company Provides all Services	15%
Preference to Utah Based Companies	15%
Total	100%

The District reserves the right to select outright a single proposer, and to waive the finalists' state of the evaluation process in the event a Proposer has total points scored significantly higher than all the other Proposers responding to this RFP.

The District in its sole discretion may accept or reject any or all responses to this RFP and may waive all formalities, technicalities and irregularities. All bidders are placed on notice that award of the RFP will be based upon the products and services best suited to the District. The sole judgment of the District on such matters shall be final.

The District has identified the factors itemized above under scoring criteria as critical to a company's ability to effectively assist the District's integration of technology. (*100 evaluation points are possible*).

Pricing (*All Eligible Equipment, Cabling, Installation and Warranty*)

Proposer must abide by the district's bid policy. Proposer must abide by the state of Utah Procurement and Bidding Laws. Proposer must provide specific price quotes for eligible services. The District reserves the right to select a combination of pricing, services and/or Proposer(s) that appears best suited to meet the needs of the District. Proposer must allocate to the extent that a clear delineation can be made between eligible and ineligible components. Proposer(s) must provide school campus bid totals, as well as total cost for the entire project.

Prior Experience with the School District
The District has also determined that a company's background, experience, and financial stability are essential for the success of a long-term relationship with its selected Proposer(s). Proposers responding to this RFP should include information about their company's experience, financial stability, and quality of services and products and satisfaction of their clients. A minimum of three (3) references (school districts preferred) should be included in bid document.

Personnel Qualifications, Professionalism & Scope of Work
The District is seeking (an) E-rate Proposer(s) that has the depth, breadth, and quality of resources necessary to complete all phases of a broad technology and service project. In addition, the timely availability of these resources and related support elements will be critical to project success. Describe the various resources from your company that will be made available to assist the District in the execution of its mission in performance of each SOW. Provide resumes and related experience summaries to demonstrate the competencies and experience of typical personnel who would be assigned to the District program. Provide a list of industry standard certified employees and their certifications. Proposers must provide scope of work (SOW) and contract information for each school campus project being proposed

Management Integration (*w/ the Existing Network Environment*)
The District requires a network that will continue to provide the District with a modern, efficient and reliable network to support bandwidth and data and provide all needed capabilities within the district school buildings. Reliability and high performance are key requirements of this networking plan, as the District network continues to support the technology needs of the future. Vendor's proposal provides interoperability with current District environment. Seamless integration with the current network and wireless equipment is most important to the District. Wireless management software must be able to successfully manage all current access point/arrays and newly installed access points/arrays from one management package/solution.

Company provides all services
The District is interested in providers that provide all components, installations and configurations for this RFP.

Utah Based Companies *(K-12 Experience)*
The District is interested in providers that understand the technology, administrative, and instructional challenges facing today's educators, children and administrators. The education environment is vastly changing with challenges that make technology decisions more important as they reach the District constituencies. The respondent must show that their solutions are sustainable within the framework of the District's resources to implement and maintain ongoing operations and that future support is local and Utah based.

ADDITIONAL TERMS AND CONDITIONS

A. CONTRACT TERM

The term of the contract term will begin when the technology director approves and a written contract is signed by both the District and the vendor/bidder selected. The term of the contract award will begin July 1, 2016. Initiation of the contract is dependent on E-Rate funding, in the event E-Rate does not fund the project then the contract may be null and void, or the district may opt to proceed with current funding. In addition, a Funding Commitment Decision Letter (FCDL) does not guarantee the District will proceed with this project and may only be able to proceed with portions of the project on a per school campus basis.

B. CONTRACT/PURCHASE ORDER TERMINATION

The District shall reserve the right to terminate any contract/purchase order entered into as a result of the REQUEST FOR PROPOSAL at any time by giving thirty (30) days written notice of its intent to cancel. In the event the Proposer fails to carry out and comply with any of the conditions and agreements to be performed under the specifications, the District will notify the Proposer, in writing, of such failure or default. In the event the necessary corrective action has not been completed within a 10-day period, the Proposer must submit, in writing, why such corrective action has not been performed. The District reserves the right to determine whether or not such non-compliance may be construed as a failure of performance of the contract/purchase order.

C. LICENSING REQUIREMENTS

The successful Proposer must keep himself informed of, and adhere to, all laws and ordinances governing any matter related to work performed under the resulting contract/purchase order. The successful Proposer will obtain all necessary licenses and permits, and will be aware of all labor conditions and agreements relating to the work specified in this document and shall make all provisions necessary to avoid any disputes which might arise from those conditions and agreements and shall be responsible for any delays, damages or extra costs caused by disputes.

D. SAFETY REQUIREMENTS

It shall be the Proposer's responsibility to provide for the safety of workers and public in compliance with the requirements of insurance and public health and safety. The District requires all workers on-site to have a company badge. A list of workers with current photograph must be provided to the school district's Technology Department throughout the life cycle of the project(s) that require installation or services.

E. INDEMNIFICATION

The Proposer shall be responsible for all damage persons or property that occurs as a result of his fault or negligence, or that of any of his employees, agents, or subcontractors. Proposer shall save and hold harmless the District and its School Board against any and all loss, cost, damage, claims, expense or liability in connection with the performance of the contract/purchase order. Any equipment or facilities damaged by the Proposer's operation shall be repaired and /or restored to their original condition, including cleaning and painting, at the Proposer's expense. The successful Proposer will assume the liability for all losses, damages (including loss of use), expenses, demands and claims in connection with or arising out of any injury or alleged injury to persons (including death), or damages or alleged damage to property, sustained or alleged to have been sustained in connection with or to have arisen out of the

performance of the work by the Proposer, and his agents, and employees, including losses, expenses, or damages sustained by the District. The successful Proposer will undertake and agree to indemnify and hold harmless the District and its board, individually or collectively, and the officers, agents, and employees of the District and its Board, from any and all such losses, expenses, damages (including loss of use), and to pay all damages, judgments, costs and expenses, including attorney's fees in connection with said demands and claims resulting thereof. Any claims against the District must be filed with the State of Utah.

The Proposer shall abide by the Federal Occupational Safety and Health Administration (OSHA) regulations that apply to work performed under this Request. The Proposer shall defend, indemnify, and hold the District free and harmless against any and all claims, loss, liability and expense resulting from any alleged violation(s) of said regulation (s) including but not limited to, fines or penalties, judgments, court costs, and attorney's fees.

F. ATTORNEYS STATEMENT
In the event that the District employs attorneys or incurs other expenses that it may deem necessary to protect or endorse its rights under this contract/purchase order, the Proposer agrees to pay the attorney's fees and expenses incurred by the District. If either party defaults in the performance of this agreement, the defaulting party shall pay the non-defaulting party responsible attorney's fees and court costs.

G. NEGOTIATIONS
The District reserves the right to have any additional terms and conditions incorporated into the agreement provided an authorized modification to the contract/purchase order is mutually agreed upon and duly executed by both parties.

H. ORDER OF PRECEDENCE
In the event of an inconsistency between the terms and conditions of the resulting contract/purchase order, the inconsistency shall be resolved by giving precedence in the following order: (1) The REQUEST FOR PROPOSAL, including the Scope of Work and Statement of Qualifications, and (2) Proposer Response.

PROJECT START DATE
The District reserves the right to start the project on or after July 1, 2016, even if the project has not yet received funding. All pricing proposed will be considered valid.

THE DISTRICT'S GENERAL RESPONSIBILTIES

Access for Installation
The District will, during the progress of the installation, allow the Service Provider and its employee's access to the premises and facilities at all reasonable hours or at such hours as The District representative and the Service Provider agree upon. For installation of equipment for this project, all school sites will be open from 8:00AM to 4:00PM. However, access to the school sites may be extended as may be required with prior notice given to the District contact.

Existing Conduit
The District will provide access to existing conduit or the placement of new conduit if necessary to all work locations, floors, buildings, etc., to support the media installation and provide Service Provider access to these adjacent areas where and when required.

Heating/Cooling
The District will provide heat or cooling where/when required and general illumination in rooms where work is to be performed by The Service Provider.

Inspections
The District will promptly make inspections when notified by the Service Provider that the equipment or any part thereof, is ready for acceptance.

Electrical
The District will provide all electrical needs within the district buildings.

Delay in Work
It is understood that the Service Provider will not be held accountable for any delays caused by The District.

SERVICE PROVIDER'S GENERAL RESPONSIBILITIES

Provision
The Service Provider must provide all supervision, tools, equipment, hardware and wiring materials as specified; transportation, erection, construction, unloading, inspecting, and keeping inventory as specified in attached contract documents. Whenever in the Contract the terms "provide, furnish, supply, install, etc.", can be interpreted as requiring the Service Provider both to furnish and/or install materials, unless specific provisioning/ installation of the materials by The District is denoted.

Building Firewalls
Provide for the installation of all conduits and sleeves through building firewalls and application of fire-stopping materials as required to meet codes.

Ceiling Tiles
Provide for the removal and reinstallation of all ceiling tiles as needed. Any broken ceiling tiles will be replaced with equal or better quality of the damaged ceiling tiles.

Identification
The Service Provider will identify to the district any work necessitating cutting into or through any part of the building structure such as girders, beams, concrete, tile floors or partition ceilings.

Permits
The Service Provider shall obtain all necessary county, municipal, and/or state work/building permits. This includes any permits that may be needed to gain the right of way for outside cabling.

Damage
The Service Provider will be responsible for repairs of damage to the building, roads, equipment, existing cable, or property. The Service Provider will promptly report to a representative of The District of any such damage to the building, roads, equipment, existing cable, or property that may occur while performing work in the facilities.

Installation

Install the wire, cable, and/or associated hardware in accordance with the manufacturer's specifications. All cabling and equipment shall be sufficiently labeled such that the equipment designation or purpose, interconnections and cabling endpoints can be easily determined. All labeling shall correspond with the drawings provided in Item 15 below.

Test and Inspections
Conduct tests and inspections in the presence of a District technical representative after installation has been completed in order that The District may be assured that the requirements for the installation are met.

Completion Notification
Promptly notify The District designated contact of completion of this proposed project.

Defects
The Service Provider will promptly correct all defects for which the Service Provider is responsible.

The District Contact
The Service Provider must coordinate all work with The District designated contact.

Cleanup
Upon completion of the work each day, the Service Provider must remove all tools, equipment, rubbish and debris from the premises and must leave the premises clean and neat and in the same condition as it was found.

Subcontractors
The Service Providers may use subcontractors to perform work. However, all responsibilities rest with the Service Provider *(see page 8, paragraph E)*.

Testing
The Service Provider will provide The District with complete detailed test results. The test results must be delivered to The District before payment.

Drawings
The Service Provider shall furnish, with the proposal, a complete set of drawings showing the design of the infrastructure and the interconnection of all equipment installed. The drawings will also include the location of existing electronic equipment utilized in the new installation. The drawings should indicate if any fiber is run above or below ground.

Codes, Standards, and Ordinances
All work shall conform to the latest edition of the National Electrical Code, the Building Code, and all local codes and ordinances, as applicable. ANSI/TIA-568-C, ANSI/TIA-569-C and ANSI/TIA-607-B shall be adhered to during all installation activities. Methodologies outlined in the latest edition of the BICSI *Telecommunications Distribution Methods Manual* shall also be used during all installation activities. Should conflicts exist with the foregoing, the authority having jurisdiction for enforcement will have responsibility for making interpretation.

Safety
The Service Provider shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the work. The Service Provider shall at all times comply with the regulations set forth by federal, state, and local laws; rules; and regulations concerning "OSHA", and all

applicable state labor laws, regulations, and standards. The Service Provider shall indemnify and hold harmless The Customer from and against all liabilities, suits, damages, costs, and expenses (including attorney's fees and court costs) that may be imposed on The Customer because of The Service Provider, subcontractor, or supplier's failure to comply with the regulations stated herein.

Patents and Royalties
The Service Provider, without exception, shall indemnify and hold harmless The Customer and its employees from any liability of any nature or kind, including costs and expenses for or on account of any trademarked, copyrighted, patented, or non- patented invention, process, or article manufactured or used in the performance of the Contract, including its use by The Customer. If The Service Provider or subcontractor uses any design, device, or material covered by letters, patent, trademark, or copyright, it is mutually understood and agreed without exception that the proposal prices shall include all royalties or cost arising from the use of such design, device, or materials in any way involved in the work.

USAC Certifications
The Service Provider must be an approved USAC Service Provider with a current SPIN and SPAC. It will be the responsibility of the Service Provider to maintain all USAC certifications throughout the term of the contract.

WIRELESS DESIGN SPECIFICATIONS

The following section describes the specific technical requirements for the wireless component of this RFP. This is not an all-inclusive list. The equipment specification list that is provided below is a minimum guideline list.

1. (Xirrus or Equivalent) Wireless Access Points
2. Wireless platform shall meet the 802.11ac wireless standard.
3. Wireless platform shall be minimum 802.11ac WAVE 1, with alternative product options to upgrade to 802.11ac WAVE 2.
4. Wireless access points shall be able to support all 5.0 GHz without additional equipment to purchase.
5. Wireless platform shall be fixed or modular and include a minimum of two radios per instructional area indicated on school building drawings. This will include at least one 2.4GHz and one 5.0GHz radio.
6. Wireless platform shall include application control management that is performed at the AP. Preference shall be given to how many applications can be prioritized, limited or blocked. These policies shall be applied without interruption or rebooting of the equipment.
7. Wireless platform shall support sufficient uplink capacity to accommodate the user density and capacity requirements of the AP. The AP shall support at least 2 Gigabit Ethernet uplinks.
8. Wireless platform shall support full function DPI (Deep Packet Inspection) engine directly in each unit with comprehensive application visibility and policy enforcement (QoS, rate limiting, blocking, time of day access, etc.) to ensure reliable wireless service, even under heavy network load.
9. Wireless platform shall support an integrated, distributed controller function within each device to eliminate the potential single point of failure and bottleneck/chokepoint of a centralized system.
10. All radios on the wireless platform shall be software programmable, each capable of operating on either 5GHz or 2.4GHz, to support all 802.11ac operation on the device and enabling the migration of radios to a 100% 802.11ac network over time.
11. Wireless platform shall support automatic association of otherwise non-connected clients to Wi-Fi to help clear the RF spectrum, in particular to help improve performance in the congested 2.4GHz band.

(AP Honeypot functionality)

12. Wireless platform shall be delivered as a self-contained system with integrated controller functionality to support easy deployment/striking of temporary wireless infrastructure or to support augmentation of wireless for events needing greater density support.
13. Wireless platform shall support integrated location functionality with x-y coordinate mapping of clients and rogues within the environment. Location information shall be available via the management system and via APIs.
14. Wireless platform shall support integrated rogue AP detection and mitigation. Radio resources should be sufficient within a given AP such that a radio can be dedicated to the rogue control function without impacting the ability of the AP to service other users.
15. Wireless platform shall support ability to assign specific Wi-Fi modes (802.11a/b/g/n/ac) and/or specific SSIDs to specific radios to help isolate clients types and to optimize system performance.
16. Wireless platform shall support bonding up to 2 radios per link and creation of up to 4 links per device for dedicated, non-time shared wireless backhaul.
17. Wireless system shall support the automatic assignment of wireless stations to radios based on band (5GHz/2.4GHz) and Wi-Fi mode (802.11a/b/g/n/ac) to optimize client performance. Where possible, all stations of like type shall be assigned to their own radios so slower clients do not impede faster ones.
18. Wireless platform shall support systematic validation of operational status of radio resources, network services (servers/gateways) and client status (connection quality) to ensure optimal network operation and user experience.
19. Wireless platform shall be scalable to support double the growth without adding additional controllers, cables, or switch ports to the design.
20. If separate PoE injectors have to be used in lieu of PoE (802.3at) switched ports, multi-port rack based PoE injectors supplying the necessary power requirements to the APs are preferred over single PoE injector units.
21. For the wireless solution that is bid, the District requires the bidder to provide one and five-year warranty options on the bid/quote, to include all hardware and software upgrades and technical assistance to the District support staff as a part of the bid price. Please list by line item.

CABLING SPECIFICATIONS

The following section describes the specific technical requirements for the cabling component of this RFP. This is not an all-inclusive list. The equipment specification list that is provided below is a minimum guideline list.

1. Category 6 cabling (General GenSpeed6 Plenum or Equivalent) shall be utilized to provide the wired backbone of the wireless platform. Installation of the cabling plant shall conform to the latest standards and procedures outlined in the ANSI/TIA-568-C, ANSI/TIA-569-C and ANSI/TIA-607B Telecommunication Standards documentation. Methodologies outlined in the latest edition of the BICSI *Telecommunications Distribution Methods Manual* shall also be used during all installation activities.
2. Separate Category 6 compliant patch panels (Hubbell or equivalent) and connectors (Hubbell or equivalent) shall be utilized through-out the cabling plant to assure end-to- end Category 6a certification testing. Patch panels shall include non-adhesive labels with plastic covers for proper identification of terminated jacks
3. Cabling shall be installed in an organized and neat fashion, utilizing approved cable management

devices and assuring that minimum bend radius requirements are met. Hook and loop fasteners shall be used instead of cable ties.

4. Approved junction boxes (Hubbell or equivalent) shall be utilized for the termination to the wireless device. It shall be marked with the specific patch panel number and cable run number.
5. Five (5) cable runs shall be installed to every instructional area AP location and three (3) to other designated AP locations. Category 6 patch cables shall be used at both the patch panel and junction box ends. Green cable will be used for all cable except video surveillance (purple).
6. Any exposed cabling in the classrooms/labs etc., shall be installed in raceway (Hubbell or equivalent) and firmly attached to the wall or ceiling with appropriate fasteners. Adhesive backing of the raceway shall not be used as the primary fastener.
7. Upon completion of the cabling plant, all drops shall be tested for attenuation, propagation delay, NEXT, PSNEXT, FEXT, AFEXT, etc. as per TIA-568-C Telecommunication Standards. One electronic copy of the test results will be given to the Technology Coordinator along with one electronic copy of the cabling diagram/schematic of all interconnects of installed cabling runs, patch panel port identification numbers, jack numbers, etc. Complete documentation is required before the issuance of a purchase order.

ETHERNET NETWORK EQUIPMENT SPECIFICATIONS

The following section describes the specific technical requirements for the Ethernet network component of this RFP. This is not an all-inclusive list. The equipment specification list that is provided below is a minimum guideline list.

1. (Cisco or equivalent) 24 or 48 Port 1Gbps PoE+ Ethernet switches, with at least two (2) SFP+ uplink ports, shall be installed to provide the data interconnect between the wireless APs and the existing network infrastructure. The type of switch used shall have the capability to use stacking cables to connect to the existing switch fabric and be a member of the existing stack.
2. capability and management. It is the District's intention to use existing and freely available switch ports where applicable and add new switch ports where needed in order to connect newly installed wireless APs. Currently, the District has a mixture of Cisco 2960X, 3650, and 3850 series PoE+ type switches.
3. Cisco 2960X or equivalent switches must support stacking, and have at least 2 SFP+ ports.
4. Cisco 3850 or equivalent switches must support stacking, an RPS, and a 4 port SFP+ card.
5. Cisco 3650 or equivalent switches must have at least 4 X SFP+ ports and a RPS.

FIREWALL EQUIPMENT SPECIFICATIONS

The following section describes the specific technical requirements for the Firewall component of this RFP. This is not an all-inclusive list. The equipment specification list that is provided below is a minimum guideline list.

1. (Cisco or equivalent) Next Generation Firewall appliance.
2. External (VM) Distributed Web Management capabilities for multiple firewalls.

3. Provides basic firewall features OSI layers 2 through 3.
4. Provides Network level QoS
5. Can utilize external directory systems such as AD, LDAP, eDirectory, OpenDirectory, etc. for AAA, VPN, and UserID capabilities.
6. Supports ngfw clustering (AA) and failover (AP) support.
7. Interfaces
    a. Minimum 4 X SFP+ (10 Gbps) capability
    b. Plus, a minimum of 4 X SFP or 1000basetT (1 Gbps) capability
    c. Provides minimum of 2 Gbps total throughput with all feature sets enabled under varied traffic frame sizes.
    d. Support for a minimum of 1024 VLANs
    e. Redundant Power Supply (RPS)
8. VPN capabilities
    a. Provides user VPN capabilities (IPSec, L2TP)
    b. Provides site-to-site IPSec VPN capability.
9. Integrated Threat Defense
    a. Next Generation IPS with Policy Based Enforcement Actions
    b. Advanced Virus/Malware Protection/Network File Trajectory
    c. Network Application Visibility and Controls
    d. Reputation-based URL filtering/Category weighting/Keyword Filtering
    e. SSL Decryption/Encryption Capability (MITM)
    f. Web proxy client support
10. Actionable Indicators of Compromise
    a. Correlates network and endpoint security intelligence
    b. Provides highly accurate visibility into suspect and malicious file and host behavior.
    c. Isolation of infected hosts and prioritization for rapid remediation.
11. Comprehensive Network Visibility
    a. Identify Users, Operating Systems, and Devices
    b. Communication between Virtual Machines
    c. Threats and Vulnerabilities
    d. Applications and Website Access
    e. File Transfers
    f. Automation of routine security tasks
12. Integration with Third-Party Solutions such as SIEM and Ticket systems
13. Licensing. Per user or per object pricing for licenses will not be considered.
14. H323 and H225 Compliant. Optimal video performance for delay and jitter-sensitive applications, such as VOIP, High Definition video, and future real-time sensitive applications.
15. IPv4 and IPv6 compliant

The awarded vendor shall:

(1) Install and configure new wireless system equipment, network switches and all other requested network equipment to support the wireless infrastructure and network backbone upgrade.

(2) Install all needed cabling connections, patch cables and patch panels, to access points from indicated wiring closets on school building maps.

(3) Install, upgrade and configure existing wireless system equipment (radios) from 802.11a/b/g/n capability to 802.11ac capability, where applicable. Upgraded wireless system equipment shall be re-used

within the school campus and where it best meets the needs of the school project.

(4) Collect and inventory non-upgradable wireless system equipment and return to QSD for possible reconfiguration and re-provisioning.

(5) Test all wireless equipment across the district sites after installation.

(6) Test all additional cable runs for Category 6a certification.

(7) Provide "hot maps" of wireless locations in each school building to include access point/array model and location.

(8) Submit a bid that includes total price of entire project AND must include breakdown list of all equipment and cost of each in line item (*with total cost*) PER school site.

(9) Provide a solution that includes a minimum of three radios per instructional area (*classroom/lab*) indicated on school building drawings. This will include one 2.4GHz and two 5.0GHz radios with the upgrade potential of one additional 5.0GHz radio for future growth (*see "District Initiative" information on last page).*

(10) Provide a solution that accommodates the 802.11ac wireless standard.

(11) Provide a solution for the Ethernet network that accommodates the additional wireless system equipment to include fiber modules, stacking cables and any other components that may be necessary.