

Monmouth Memorial School
Monmouth, ME
RSU 2
Bidding Documents Network Equipment

SECTION 2-A

NOTICE TO CONTRACTORS

PUBLIC SCHOOL PROJECT

Proposals shall be delivered as outlined below and marked proposal for:

Monmouth Memorial School, Network Equipment, Monmouth, Maine.

1. **Dated: 04/15/2020**

Brief Job Description:

Furnishing of, coordination, installation and training of Network Equipment for the new Monmouth Memorial School, Monmouth, ME.

Addressed to: **RSU 2**
7 Reed St.
Hallowell, ME 04347

Bids shall be emailed in PDF format, in the same message, delivered to John@TabbTech.com and JArmentrout@kidsrsu.org and received no later than 2:00 PM (Eastern Time), on Wednesday, April 15, 2020. Bids received after 2:00 PM (Eastern Time) will not be considered.

All interested bidders shall register for addenda and Q/A responses to John@TabbTech.com. Any questions must be submitted via email no later than 12:00 PM on April 10, 2020. Answers will be forwarded to all bidders.

There will not be a site inspection. Plans showing locations of access points and telecommunication rooms will be available as part of the bid documents.

The owner reserves the right to waive all formalities, and reject any and all proposals, or to accept any proposal. Proposals shall be submitted upon the letterhead of the bidder in pdf format. No decision regarding who is the successful bidder will be made at the time of bid receipts.

Electronic PDF format files of Bidding Documents may be downloaded at:

Maine BREM website:

<http://www.maine.gov/dafs/brem/business-opportunities>

END OF SECTION

SECTION 2-B

PROPOSAL FORM
SHORT FORM
PUBLIC SCHOOL PROJECT

BIDDER: _____

TO: **RSU 2**
7 Reed St.
Hallowell, ME 04347

John@TabbTech.com
Jarmentrout@kidsrsu.org

A. Having carefully examined the form of contract, general conditions and plans and specifications dated 04/02/2020

Prepared by:

For: **Monmouth Memorial School, Network Equipment, Monmouth, Maine 04347.**

as well as the premises and conditions affecting the work, we the undersigned propose to furnish all labor, equipment and materials necessary for and reasonably incidental to the construction and completion of this proposal for the amount of:

Base Bid _____ Dollars \$ _____

B. This proposal includes the following addenda to the plans and specifications:

Addendum No. _____, Dated _____ Addendum No. _____, Dated _____

Addendum No. _____, Dated _____ Addendum No. _____, Dated _____

C. The undersigned agrees, if awarded the contract, to start the work on **1 June 2020** and complete the work as outlined in section I.I.3.

Any material or materials not specified in the bidding document but deemed worthy of consideration may be introduced by the bidder in a separate letter attached to this proposal. A cost comparison must be included giving the comparison with the material specified and the reason for the suggested substitution. The basic bid shall be as specified.

The undersigned agrees, if this proposal is accepted, to sign a contract and deliver it, along with the bonds and affidavits of all insurance specified within twelve (12) calendar days after the date of notification of such acceptance, except if the 12th day falls on a holiday, a Saturday or Sunday, then the conditions will be fulfilled if the required documents are received before 12:00 o'clock noon on the day following the holiday, or the Monday following the Saturday or Sunday, and as a guarantee thereof, herewith submits a certified or cashiers check or bid bond as required.

SIGNED: _____

BY: _____

P.O. Address

NOTE: If bidder is a corporation, write state of incorporation, and if a partnership, give full names of all partners.

END OF SECTION

Request for Proposals
for
Network Equipment
and Installation

Issued 04/02/2020

**Overview of the bidding process and
Instructions to bidders for the Network Equipment for the New Monmouth
Memorial School in Monmouth, Maine.**

RSU 2 is currently constructing a new Elementary/Middle School in Monmouth, Maine to be completed in the Spring of 2020. Following this introduction are specifications for the Network and limited IT systems to be included in the school.

The response to this Request for Proposals must be a written proposal indicating the products to be provided and installed to meet the specifications and the unit pricing for each major section. Please indicate pricing of major categories of products and unit pricing where requested. Written responses are due at 2:00PM on April 15, 2020.

Proposals shall be in PDF format and delivered simultaneously to the following (2) recipients: John@TabbTech.com and JArmentrout@kidsrsu.org

No announcement will be made at the bid opening regarding which bidders may be awarded the contract.

RSU 2 reserves the right to award the contract to the provider with the proposal deemed to be the best value. Determination of the proposal with the best value is solely at the discretion of the RSU 2. RSU 2 reserves the right to reject all proposals.

All reimbursable expenses shall be included in the base bid. These shall include but not be limited to:

1. Mileage traveled in connection with this Agreement.
2. Processing fees paid for securing approval of authorities having jurisdiction over the project.
3. Any paper reproductions for submissions, which require signed approval by State government or regulatory agencies i.e the FCC.
4. Postage, handling, and delivery of any project related Instruments.
5. Misc. costs associated with the delivery of this proposal.

Those interested in bidding on this project should register their interest via email to John@TabbTech.com. in order to be notified of any addenda or further information regarding this RFP. Any questions shall be emailed to John Tabb at John@TabbTech.com. Responses shall be considered part of the RFP documents and will be emailed to all bidders. Questions must be submitted by 12:00 noon on April 10, 2020.

I. GENERAL

- A. These specifications are for installed, configured, warranted, and tested Network Equipment for the new Monmouth Memorial School.
- B. The intent is for vendors to meet all specific features listed in this request for proposal (RFP). If there are alternates that would be of benefit to the owner either through reduced cost or improved functionality or flexibility, specifically indicate which features and specifications are not being included, and what features are being added that are not herein listed, and how these modifications benefit the user (price/performance).
- C. All work on site must be performed in compliance with rules and guidelines established by the general contractor. The winning bidder will be working directly for RSU 2.
- D. The contractor shall complete all work of this Agreement by July 1, 2020.
- E. Compliance with all relevant codes including but not limited to:
 - 1. Local and state building, plumbing, mechanical, electrical, fire and health department and public safety codes agencies.
 - 2. National Fire Protection Association (NFPA).
 - 3. Occupational Safety and Health Act (OSHA).
 - 4. National Electrical Code (NEC).
 - 5. National Electrical Safety Code (NESC).
 - 6. The ICC National Building Code.
- F. Equipment types included in this RFP
 - 1. Ethernet switching and routing.
 - 2. Wireless network equipment.
 - 3. Mounting accessories and miscellaneous hardware.
 - 4. Fiber optic jumpers.
 - 5. Any power supplies or ancillary equipment that is required to allow the specified systems to function.
- G. Project Conditions
 - 1. The School is a new facility substantially complete but has yet to be opened to students.
 - 2. Any damage to existing conditions by the systems vendor will be their responsibility to repair to new condition consistent with construction documents for the project. Damages incurred and not repaired by systems vendor will be completed by the Owner and deducted from the amount due to the systems vendor.

3. Cleanup will be done daily and removed from site. Do not expect to use any onsite dumpsters as they are for strict use by the general contractor and their subcontractors. Areas worked in shall be left in a vacuumed condition, for areas completed by the general contractor prior to your work being done or completed. In all cases leave the area in better condition than you found it.
4. Training will be required prior to the school opening in the fall. Schedule for training to be coordinated with the owner according to the parameters listed below.
5. Related systems provided and installed by others:
 - a. Structured cabling system for Voice and Data including equipment racks, cabling, patch panels, and workstation jacks.
 - b. Phone System.
 - c. AV systems.
 - d. Intercom System.
 - e. Conduits, Back Boxes, and Cable Tray.

H. PERFORMANCE REQUIREMENTS

1. Submit proposal with recommendations that maximizes the features described herein. Include documentation on major system components with the proposal (e.g. brochure or technical data sheet).
2. Based on the written response to this RFP selected bidders may be given an opportunity to meet with the Owner to present the design, features, and benefits of their proposal. The intent is to allow the vendors to present those features specific to their system which they believe will provide the Owner with the maximum benefit within the budget.
3. Include all necessary labor, software, programming and the selection of the proper type and quantities of the system components and accessories to assure a complete and operational system.
4. A predictive heat map for WiFi coverage will be required to be provided by the installer before installation commences. PDF floorplans will be provided to assist in this process.
5. Following installation a test of signal strength levels throughout occupied areas of the building and selected outside areas shall be performed with coverage gaps clearly identified.
6. Each proposal must include a description of Owner training which is included with the purchase of equipment and the incremental cost to acquire additional training as needed.
7. Include proof of manufacturers approved supplier status for major system components where this is required for warranty service.
8. Each vendor must include a list of at least 3 similar projects completed in the last

3 years. Provide contact information including contact name, organization, phone, and email.

I. ALTERNATES

1. Where manufacturer's names are listed this is to establish a standard for quality and design. Where one manufacturer's name is mentioned, products of other manufacturers will be acceptable if, in the opinion of the Owner, the substitute product is of quality equal to or better than that of the material specified.
2. Detailed specifications and, if the Owner determines it is necessary, samples of proposed alternate products shall be provided to the Designer for review prior to purchase or installation of proposed alternates.
3. Cost for removal and replacement of any unapproved alternates pertaining to the items specified in this section is the sole responsibility of the systems installer.

J. SUBMITTALS

1. Provide submittals in pdf format following award of contract but prior to commencing work. Any work commencing prior to approval is at the system installer's own risk.
2. Submittal documentation shall include the following:
 - a. Table of contents.
 - b. Systems installer Name, Contact Name, Address, Telephone Number, Fax Number, and email address.
 - c. Manufacturers' certificate of warranty for the complete (or each and every of the various subsystems) Communications System. Clear documentation of effective warranty periods. All warranties shall be filled out in the Owner's name.
 - d. Maintenance Documentation including the following:
 - i. List of all equipment by manufacturer.
 - ii. Information necessary for the Owner's technical staff to perform routine and/or corrective maintenance.
 - iii. List of all spare parts.
 - iv. Original copies of manufacturer's installation and operation instructions arranged alphabetically by manufacturer.
3. Technical Diagrams and Drawings:
 - a. Provide a simplified single line drawing showing functional relationships and interconnection of all equipment. These drawings should be sufficient to provide information that a technician who is unfamiliar with the installation be able to efficiently troubleshoot and service the system.
 - b. A complete set of all technical diagrams and drawings shall be mounted on the wall either behind a plastic cover or in a durable file holder (as determined by the owner) in the main telecommunications room.

II. PRODUCTS

A. Network Switches

1. All ports shall be 10/100/1000 auto sensing with PoE available on all ports. Note: it is the responsibility of the installer to insure that PoE capabilities of the switches meet the power requirements of attached access points.
2. Switches shall be capable of layer 2 routing.
3. Switches shall support management protocols SNMP 1, RMON 1, RMON 2, RMON 3, RMON 9, TELNET, SNMP 3, SNMP 2C, HTTP. And be manageable through either a GUI or command line interface.
4. VLAN support including complete IEEE 802.1Q.
5. Switches shall be stackable with a single IP address for a stack of up to 16 switches.
6. Where multiple switches are located in the same telecommunications room they shall be configured as a single stack with a single uplink module in the stack. Each uplink module shall support 4 optics modules.
7. Uplink optics shall be included as noted in the equipment table. Note, the SFP+ modules are not required to be manufactured by the switch OEM but will need documentation from the vendor that they are compatible with the switches being provided on the project.
8. The switch stack in the MDF must be equipped with fiber optic modules to accept incoming fiber links from all IDF's.
9. Link between telecommunications rooms shall be 10Gbps on OM3, fiber (there is a 12-strand OM3 fiber optic cable installed from the main equipment room to each telecommunications room).
10. Link to Monmouth Academy shall be 10Gbps on Singlemode fiber.
11. Verify full functionality of backbone link and interconnection between each switch in each stack.
12. Switch basis of design is by Meraki, MS250 series with full power options.
13. Initial purchase shall include (5) years of licensing and management.
14. See Appendix A for switch types and quantities.

B. Patch Cords

1. Fiber Optic jumpers of duplex 8/125 μ OS1 and 50/125 μ OM3 fiber with appropriate connector types to mate between the fiber optic patch panel and fiber port on the associated switch, (for the purpose of the proposal assume the jumpers are SC to LC). Length determined by distance from switch to fiber patch panel with 1.5 meter added length allowance for future moves within the rack. Confirm

connector compatibility with backbone infrastructure and switch ports prior to ordering.

2. Category 6 copper patch cords are already owned for connectivity between the patch panels and switches in the TR's.
3. Cat6 patch cords required to connect to wireless access points shall be included as part of this proposal. Note that the length required may vary based on the requirements determined by the heat map to be created as part of this project. The location of data drops for AP's are already in place as shown on the drawings, patch cords shall be used to refine the location to match the predictive heat map.

C. Wireless network system

1. Wireless network equipment shall be by the following manufacturers or approved alternates:
 - a. Meraki
2. Wireless system shall be capable of WiFi6 with throughput capability of 1.7 Gbps.
3. Wireless network shall be a managed system capable of dynamically adjusting to traffic loads that move throughout the facility due to the use of systems.
4. System may be configured with either a cloud controller, or via an onsite management device. Licensing shall be included for the first 5-years and annual fees for additional years shall be noted in the proposal.
5. Load balancing shall be automatic and not require action on the part of network technicians once the system is configured.
6. Access points shall be powered through 802.3af PoE.
7. Access points shall include all mounting hardware for both wall and ceiling tile rail installations.
8. Protective covers shall be installed over access points in the gyms.
9. Basis of design are the following models from Meraki. Acceptability of other manufacturer's products will depend on meeting the capabilities of the models below.
 - a. Classroom/Typical AP – Meraki MR36.
 - b. High Capacity AP – Meraki MR56.
10. Initial purchase shall include (5) years of licensing and management.

D. UPS

1. Basis of design is the APC Smart-UPS X 3000VA.
2. Shall be rack mounted, install at the lowest available location on racks with network switches.

3. 3000 VA Output power capacity.
4. Nominal output voltage of 120V.
5. Less than 5% output voltage distortion.
6. Nominal input voltage of 120V, with NEMA L5-30 input connector.
7. Hot-swappable leakproof sealed battery.
8. Full time noise filtering and surge protection to 680 Joules.
9. Automatic self testing and disconnected battery notification.
10. Network management card AP9631 included.
11. Include Remote temperature probe.
12. LCD status and control panel.

E. WARRANTY

1. Switches, firewall, and wireless equipment shall have a 3-year, advance replacement, manufacturers warranty included in the base bid.
2. Additional warrantee options shall be listed as add alternate(s).

III. EXECUTION

A. FIELD QUALITY CONTROL

1. Provide an on-site job supervisor to coordinate with the Owner throughout the performance of the work through completion.
2. There will be Pre-Start Meeting to review existing conditions and project schedule with the Owner.
3. Owner will require a schedule to be submitted prior to commencing along with a Purchase & Delivery Schedule to be updated regularly.
4. Network equipment may not be staged at the site as secure storage may not be available.
5. Do not drop ship equipment to the job site or any school facility.
6. Perform operational test on completed installation to verify proper operation of all systems.

B. FIELD SERVICES

1. Install all equipment and make final connections to equipment. This includes installation of access points throughout the school and any network equipment in telecommunication rooms. Note, cabling from telecommunications rooms to

access point locations is by others. Patch cord from the data jack to the access point to be provided as part of this scope.

2. Perform field inspection and testing.
3. Provide design assistance, installation, configuration including but not limited to: DHCP scopes, VLANs, guest on boarding, SSID setup, etc.
4. Demonstrate system operation and provide on site training.
5. Provide the services of a manufacturer trained, authorized, technician to supervise the installation and final connections, plus adjusting, programming and all testing of the system required to assure a complete and fully operative facility and to instruct designated personnel in the operation, adjustment, testing and maintenance of the system.

C. TRAINING

1. Provide one training session for the Owners IT staff on configuration, maintenance, and troubleshooting of network equipment.
2. Training shall include
 - a. Use of management features.
 - b. How to configure 802.1P and 802.1Q features.
 - c. Configuration of a replacement switch or wireless access point.

D. SUPPORT

1. Provide 1-year of unlimited phone support.
2. Provide monitoring and management services for the wireless network for a 1-year period.

Appendix A

Switch Count and Type by Data Room:

Item	Location	Quantity	Model
AP	Classroom	41	MR36
AP	LargeSpace	4	MR56
Switch	MDF	2	MS250 24P
Switch	IDF A102C	1	MS250-48FP
		1	MS250 24P
Switch	IDF A004	2	MS250-48FP
		1	MS250 24P
Switch	IDF A204	2	MS250-48FP
		1	MS250 24P
Switch	IDF B120	2	MS250-48FP
		1	MS250 24P
Stacking Cables	MDF/IDFs	13	1m
LRM (SFP+)	MDF/IDFs	8	MM 10G
LRS (SFP+)	MDF	2	SM 10G