

August 9, 2022

ERRATUM/ADDENDUM 1

Request for Proposal No. 7141.5, Telecommunications and Network Wiring Installation and Integration, and Broadband Cable Network and Installation of Internal and External IP Surveillance Cameras

In the RFP document (p. 4), CONTRACT SECTION 3.0 Requirements, Minority Business Enterprise in Public Schools IS HEREBY DELETED AND REPLACED with the following:

Minority business enterprises are encouraged to respond to this RFP. Refer to the document, Minority Business Enterprise Procedures, October 1, 2017, included with this bid (Appendix B).

In the RFP document (p. 6), CONTRACT SECTION 3.3 DESIGN CAPABILITIES is HEARBY DELETED AND REPLACED with the following.

3.3 DESIGN CAPABILITIES

THE CONTRACTOR SHALL PROVIDE a design approach to be included in the RFP response, based on an artificial scenario described in Section 3.4 Design Scenario, as an evaluation of a contractor's ability to provide design services. This scenario depicts a typical school wiring installation. The contractor shall provide a CAD-created wiring layout of its proposed solution not only to present its design capabilities but to provide accurate and understandable "as-built" diagrams.

Given the number of computer network outlets, the proposed solution to the scenario shall include locations and quantities of wiring closets, wiring, racks, patch panels, wire management trays, fiber boxes, power strips, patch cables, and termination blocks. ~~Candidate wiring closets are specified in the drawings in Attachment E.~~ In addition, the contractor shall propose a Local Area Networking topology including backbone design, quantities and locations of concentrators/hubs/switches, 10/100 switches, computer system modular patch panels, and recommended spare hub ports and chassis slots.

The contractor is not required to provide supporting costs for this design scenario but should offer a practical design with efficient use of space, materials and equipment.

In the RFP document (p. 6 - 8), CONTRACT SECTION 3.4 DESIGN SCENARIO IS HEARBY DELETED AND REPLACED with the following.

3.4 DESIGN SCENARIO

A typical high school requires wiring and integration of an internal 10/100/1000/10000 Base-T Ethernet computer network to include all racks, cabling, hubs, 10/100/1,000/10,000 switch and support equipment. The contractor shall propose a hypothetical design as well as the steps it would take to install, integrate, and test the cabling infrastructure and supporting hubs and other equipment. The design shall include a configuration for the equipment layout in each distribution closet. The layout shall consider future growth in the number of patch panel terminations by 10/100/1000 percent. The design, including quantity of switches, shall provide for 100% activation of the 10/100/1000 Base-T outlets installed. Fiber outlets shall be 100% terminated to the patch panel only. No fiber outlets are to be made active in this scenario.

There are a total of 99 classrooms, 8 computer rooms, 6 conference rooms, and seven (7) offices on three (3) floors. The contractor shall propose the quantity and location of wiring closets ~~based on their potential locations shown on the drawings~~. One of the ground floor wiring closets shall be used as the Main Distribution Frame (MDF), with other closets to be used as Intermediate Distribution Frames (IDFs). The existing wiring environment from the Demarcation point to the MDF consists of the following:

High Schools - 50 Pr.

Middle Schools – 25 Pr.

Elementary Schools –25 Pr.

The network shall include vertical and horizontal ("backbone") channels implemented with fiber optic cable. Assume that adequate power is provided to each distribution closet, and that Wide Area Network (WAN) services will be provided by a router located at the MDF.

Unshielded Twisted Pair (UTP) cabling

The twisted pair cable shall be 4 pair, Category 6, Unshielded Twisted Pair (UTP) cable meeting or exceeding UL 444, UL 910, UL 1666, ISO/IEC 11801-1995, ANSI/EIA/TIA 568-B.2-1, and TSB 36 standards.

The following specifications apply:

Conductor	23 AWG, solid, annealed bare Copper
Impedance	100 ohm +/- 15 @ 1-100 MHz: 100 +/- 22 ohms @ 100-250 MHz: 100 +/- 32 ohms @ 250-550 MHz.
Max DC Resistance	30.8 ohms per 1000 ft
ETL or UL verified	
Plenum rated (if required)	

Maximum attenuation (dB per 100m) @ 20 Degrees C as follows:

<u>Frequency</u>	<u>Attenuation</u>
1 MHz	2.0 dB
4 MHz	3.8 dB
8 MHz	5.4 dB
10 MHz	6.0 dB
16 MHz	7.6 dB
20 MHz	8.5 dB
25 MHz	9.6 dB
31.25 MHz	10.7 dB
62.5 MHz	15.5 dB
100 MHz	19.9 dB
200 MHz	29.2 dB
250 MHz	33.0 dB

Worst pair near end cross talk (NEXT) (dB per 100m) as follows:

<u>Frequency</u>	<u>Attenuation</u>
1 MHz	74.3 dB
4 MHz	65.3 dB
8 MHz	60.8 dB
10 MHz	59.3 dB
16 MHz	56.3 dB
20 MHz	54.8 dB
25 MHz	53.3 dB
31.25 MHz	51.9 dB
62.5 MHz	47.4 dB
100 MHz	44.3 dB
200 MHz	39.8 dB
250 MHz	38.3 dB

Optical Fiber Cabling:

Multimode fiber shall be dual-window, graded-index optical fiber waveguide with nominal 50/125 pm core/cladding diameter and be rated OFNP.

It shall be rated for a minimum bandwidth of 160 MHz/km at 850 nm and 500 MHz/km at 1300 nm.

The maximum acceptable attenuation is 3.75 dB/km at 850 nm and 1.5 dB/km at 1300 nm and at 1500 nm.

Cables shall have the appropriate jacketing to withstand the usage and location of the fiber runs.

The following definitions apply for outlet locations:

MONTGOMERY COUNTY PUBLIC SCHOOLS

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1. Front of the room: wall with door
2. Back of the room: wall opposite door.

Segment distances shall not exceed the following:

1. 1 Gig Base-T: 328 ft (100m)
2. Fiber: 6562 ft (2000m)

All other terms and conditions remain the same.



Angela McIntosh-Davis, NIGP-CPP, CPPB
Director - Division of Procurement

AMD:jj

Please indicate your acceptance of this notice by signing below and return with your bid or under separate cover.

Accepted: _____
Name and Title

Name of Company: _____