TECHNOLOGY SYSTEMS

NARRATIVE REPORT

The following is the Technology System narrative, which defines the scope of work and capacities of the Communications system infrastructure and Security system as well as the Basis of Design.

1. CODES
   A. All work installed under Section 270000 shall comply with the Massachusetts Building Code, and all local, county, and federal codes, laws, statues, and authorities having jurisdiction.

2. DESIGN INTENT
   A. All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Technology and Security work and all items incidental thereto, including commissioning and testing.

3. TECHNOLOGY
   A. The data system infrastructure will consist of fiber optic backbone cabling. Horizontal wiring will consist of Category 6A UTP Plenum rated cabling for both data and telephone systems for gigabit connectivity. The telephone infrastructure will accommodate PBX, or VOIP based voice systems. A new IP telephone system will be used.
   B. Each classroom will have 4 data outlets for student computers. Two data, one voice with video and audio connections to a wall mounted projector will be provided at teacher’s station with interconnectivity to an interactive whiteboard. A wall phone outlet with 2 way ceiling speaker will be provided for communications with administration. Clocks will be wireless, part of a GPS/LAN based centralized clock system. Wireless access points will be provided in all classrooms and other spaces.
   C. A central paging system will be provided and integrated with the telephone system.
   D. A wireless GPS/LAN based master clock system will be provided with 120V wireless remote clocks that act as transceivers.
   E. The Main Distribution Frame (MDF) will contain all core network switching and IP voice switch. Intermediate Distribution Frames (IDFs) will serve each floor/wing of the school. A fiber optic backbone will be provided from each IDF to MDF.
   F. New temporary tel/data service is to be provided for on-site modular classrooms. Connections to modular classroom systems are to be provided by this contractor.

4. TESTING REQUIREMENTS
   A. The Technology and Security Contractors shall provide testing of the following systems with the Owner and Owner’s representative present:
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- Telephone and data cabling
- Fiber optic backbone cabling
- Paging system
- Wireless clock system
- A/V wiring for classrooms

Testing reports shall be submitted to the engineer for review and approval before providing to the Owner.

5. OPERATION MANUALS AND MAINTENANCE MANUALS:
   A. When the project is completed, the Technology Contractor shall provide operation and maintenance manuals to the Owner.

6. RECORD DRAWINGS AND CONTROL DOCUMENTS:
   A. When the project is completed, an as-built set of drawings, showing all lighting and power requirements from contract and addendum items, will be provided to the Owner.

7. COMMISSIONING
   A. The project shall be commissioned per Commissioning Section of the specifications.

8. PHASING
   A. There is no impact on Phasing.