



## *Newton Community School District*



REQUEST FOR PROPOSAL

Sound Enhancement AV Bid Package and Specifications  
For  
Softball Complex  
High School Gymnasium  
High School Auditorium of Performing Arts

Issued: 12-20-2017

By:

Bob Callaghan, Superintendent of Schools  
Newton Community School District Office  
700 N. 4th Ave E. Suite 300, Newton, Iowa 50208  
(P) 641-792-5809 (F) 641.792.9159

## **SCHEDULE OF EVENTS**

<b><u>Event</u></b>	<b><u>Date</u></b>
Release of Request for Proposals	12/20/2017
Questions Due in Writing	12/29/2017
Final Addendum Release(If Applicable)	01/04/2017
Proposals Due	01/12/2018
Contract Award (School Board Meeting) (Regular Board Meeting 6:30 PM E.J.H Beard Admin Center)	01/22/2018
Installation Begins (Coordinate w/District)	TBD
Acceptance Testing & Training	Within 10 Days of the Completion of each individual Project Site

# Table of Contents

## Section 21000 – Project Overview

- 21010 Project Summary
- 21020 Bid Requirements/Contractor Qualifications
- 21030 Billing and Change Orders
- 21040 Submittals
- 21050 Site-Specific Requirements
- 21060 Training & Warranty
- 21070 Project Management & Quality Assurance
- 21080 Contractor's Responsibility
- 21090 BID: Requirements, Consideration, Rejection, and Acceptance Criteria
- 21100 Bidder Form and Signature

## Section 27000 – Communications

- 27000 General-Related Documents and Definitions
- 27010 Data Cabling Overview
- 27020 Horizontal Requirements
- 27030 Backbone Requirements
- 27040 Outside Plant (OSP) Fiber Backbone
- 27050 Pathways/Cable Tray
- 27060 TR Racks and Enclosures
- 27070 Jacks & Faceplates
- 27080 Patch Cords and Fiber Jumpers
- 27090 Grounding, Bonding, and Fire-stop
- 27100 Identification, Labeling, Testing, Colors & Administration
- 27110 Final Deliverables
- 27120 Networking: Wireless, Data Switching System, and UPS back-up
- 27130 DAS System/Public Safety
- 27140 IP Physical Security System: Door Access/IP Surveillance/VMS
- 27150 Audio/Video System**
- 27155 Digital Signage
- 27160 CATV
- 27170 IP Telephony System
- 27180 Paging and Bell System
- 27185 Sound Masking
- 27190 PANDUIT technical and product specification reference
- 27200 Project Maps/Drawings/Symbol Key

## **DISTRICT OVERVIEW**

### **District Overview**

The Newton Community School District (NCSD) consists of approximately 3000 students, 200 instructors, and 16 administrative and support personnel. The district is housed in 9 facility complexes, including 7 schools.

**Our District Strives to partner with companies that will work to assist our Staff to achieve District goals as we believe that all is done for the betterment of our Students:**



### ***Mission***

***The Newton Community School District will do whatever it takes to ensure all students learn to think, innovate and succeed.***

**The Newton Community School District:**

#### **District Office**

1302 First Avenue West

Newton, Iowa 50208

Phone: 641.792.5809

Fax: 641.792.9159

Superintendent of Schools: Bob Callaghan

[callaghanb@newton.k12.ia.us](mailto:callaghanb@newton.k12.ia.us)

**Aurora Heights Intermediate**

310 E 23rd St S  
Newton, IA 50208

**Berg Middle School – HS SOFTBALL COMPLEX Project**

1900 N 5th Ave E  
Newton, IA 50208  
Phone: 641-792-7741  
Fax: 641-792-7779

Principal: Mrs. Lisa Sharp

Email: sharpl@newtoncsd.org

(Berg Middle School is located in the Northeast part of Newton. The home of our High School Softball Team.)

Director of Athletics & Activities: Scott Garvis (@ HS (641) 792-5797)

**Emerson Hough Elementary**

700 N 4th Ave E  
Newton, IA 50208

**Newton High School-Gymnasium and Auditorium Projects**

800 E 4th St S  
Newton, IA 50208  
Phone: 641-792-5797  
Fax: 641-792-0005

Principal: Mr. Bill Peters

Email: petersb@newtoncsd.org

NHS Principal - Bill Peters

**\*Softball Complex is located South of the Football Stadium: W. 15<sup>th</sup> Ave S. and S. 6<sup>th</sup> Street W.**

**Thomas Jefferson Elementary**

112 Thomas Jefferson Dr  
Newton, IA 50208

**WEST Academy**

1302 1st Ave West  
Newton, IA 50208

**Woodrow Wilson Intermediate**

801 S 8th Ave W  
Newton, IA 50208

## **Transportation (Facilities) Building**

1320 1st Ave W  
Newton, IA 50208

## **Technology Building – District Data Center**

1320 1st Ave W  
Newton, IA 50208  
Technology Supervisor: Erik Davis  
davise@newtoncsd.org  
Office Phone: (641) 791-3647 x 2540

### **21010 Project Summary**

Newton Community School District (NCSD) is looking for a single source contractor to provide a turnkey Audio Video Technology Integration that includes Cabling Infrastructure and all respective active system components to provide a complete and high-performing system. Contractor must present a proposal for each of the three sites that make up the complete project represented in the RFP document for the District Sound Enhancement Project. The Project consists of three parts; the Softball Complex, the High School Gymnasium, and the High School Auditorium of performing arts. Any Category rated cabling that may be part of your response and AV integration to be installed within the District must continue the established standard of Category 6 and 6A (Verify Application with District IT Director) Panduit manufactured complete channel components supported by the Twenty (25) year PANDUIT Structured Connectivity Solutions Extended Product and Application Assurance Warranty. Contractor must comply with all system certifications outlined in the RFP. The bid will address the improvement of the Audio systems at the Softball Field, and the Gymnasium and Auditorium both located at the High School. The responding Contractor must provide a complete response; The District will make an award based on the complete project or by individual sites at the District's discretion based on what is in their best interest.

### **The basis for consideration and criteria for project award is listed below in section 21020: Bid Requirements/Contractor Qualifications.**

One Prime Technology Contractor must submit a complete bid package. The submitting Prime Technology Contractor may utilize sub-contractors for individual sections who meet the qualifications and will perform the work of that respective section according to the specification. The Prime contractor must outline areas that will be performed by sub-contractors and provide documentation to verify the qualifications of specified sub-contractor to all requirements of the outlined project and specifications at the time of bid.

The following outlines the specific scope expectations for these Audio Enhancement projects. Each of the respective specification sections will outline mandatory approved manufacturers that will work together. No alternates or exceptions allowed unless pre-approved and documented in addenda as an acceptable addition to the original specification.

New cable pathways will need to be addressed in order to meet the industry standards and manufacturer warranty requirements for routing supporting infrastructure. It is the responsibility of the responding contractor to cover all needed components as a turn-key installation and working system. Contractor must work with the district project contacts to adhere to district calendar and schedule requirements with the least amount of disruption and maximum safety for all. All testing and turnover will directly follow the completion of the projects: The softball complex will need to be completed prior to the start of the Spring 2018 season, the Gymnasium and Auditorium are immediate start builds upon project award with deadlines jointly set with District Superintendent to best serve educational and administrative needs. All cutovers that require downtime must be communicated and approved by district project contacts in order to provide those who will be impacted proper notice.

## **21020**

### **Bid Requirements/ Contractor Qualifications**

The submitting contractor must meet the following requirements and must be prepared to provide upon request of the District. All criteria listed within 21020 will be part of the evaluation of award with valuation for each within the RFP matrix. Failure to comply will result in disqualification.

#### **The following items (1-8) are the mandatory Contractor Qualifications to be met by all responding contractors:**

- 1) Contractor must be able to provide a performance and payment bond to the District. (Cost of the bond will be added to the submitted RFP response upon request)
- 2) Contractor is responsible for facilitating all supported services reflected in this RFP and must be able to provide a one-hour emergency response time to all schools within the District.
- 3) Contractor must be authorized to represent the proposed solutions and required to have certified personnel who will be installing the systems, and oversee the commission of the proposed solutions represented in this RFP. (Verified by the company and technician specific certificates) (Sub-Contracted Services are NOT allowed for Active System Solutions)
- 4) Contractor must submit proof that the business is licensed, and has operated under the current name for at least 10 years, while performing the professional services required by this RFP.
- 5) Contractor must provide proof of insurance.
- 6) Contractor must submit three (3) references for like projects containing like materials and systems. (More than three references may be submitted in order to cover all applications represented within the RFP)
- 7) Contractor must provide documentation of warranties afforded to the District Certification of all represented warranted infrastructure and active systems.
- 8) Contractor must provide resumes for the following individuals responsible for executing the project: Project Manager and at least three company technicians stating their respective certifications (both structured cabling and systems if applicable), which are necessary to meet the warranty requirements for a certified installation. The project manager in which the resume is provided, must work the project to completion.



## **21030**

### **Billing and Change Orders**

The Contractor shall submit any invoice within seventy-two (72) hours of the completion of each billing cycle. This billing cycle must be approved by the Owner prior to commencement of the project. Once detected, any revisions or corrections must be provided in writing to the Owner's representative within twenty-four (24) hours of discovery.

Within thirty (30) days of project cutover, final project documentation shall be submitted to the Owner or Owner's representative for review and acceptance. This documentation may include, but is not limited to:

- 1) CAD Drawings
- 2) Test Results
- 3) Warranty Documents
- 4) Change Orders and Summary
- 5) Final Billing
- 6) Manuals

All documentation necessary for the maintenance or operation of any system must be provided prior to project completion.

Apart from an extension of time, no payment or claim for damages shall be made to the Contractor as compensation for damages for any ordinary delays or hindrances from any cause whatsoever in the progress of the work, notwithstanding whether such delay shall be considered avoidable or unavoidable.

Any change order request shall be submitted by the Contractor in writing within one (1) business day. This request shall include:

- 1) Description of work
- 2) Man-hours required
- 3) Labor rate
- 4) Labor total
- 5) Materials required
- 6) Material quantity
- 7) Material unit cost
- 8) Material total
- 9) Applicable tax
- 10) Change order request total
- 11) Contract total to date

All change orders shall be compiled by the Contractor in a spreadsheet that includes:

- 1) Contracted amount
- 2) Change order description & number
- 3) Applicable taxes
- 4) Applicable shipping & expedite fees
- 5) All prior change orders
- 6) Status of each change order
- 7) Revised contract total

Failure to provide change order requests or failure to implement a change order request shall be considered a breach of contract.

All change order requests are to be submitted to the Newton Community School District's IT Manager for approval and must be authorized (signed and dated) by the Newton Community School District's IT Manager in accordance with the policies and procedures of the Newton Community School District.

Change order requests shall be subject to review and approval by the Newton Community School District's IT Manager. It is the Contractors responsibility to have each change order request accepted and approved by the Newton Community School District's IT Manager.

Any Change Order requested of the Contractor must be reviewed with the Newton Community School District's IT Manager prior to the commencement of any work. If the request is verbally approved, the Contractor shall provide in writing a fully documented and logged Change Order Request and updated Change Order Summary Log within one (1) business day from written authorization.

## **21040**

### **Submittals**

Any product not specified by description and part number in this document requires a manufacturer's cut sheet submittal with the proposal response. No alternates or substitutions will be allowed. The data cabling system from PANDUIT® (10GIG TX6A Solution) is the District Standard.

Submittals must include pricing and availability information with associated lead times.

Submittals require written approval by the Newton Community School District's IT Manager before purchase.

## **21050**

### **Site - Specific Requirements**

Any Contractor representative on the site must be identified by Vendor company uniform, shirt, or other apparel marked with the Contractors logo.

Each Contractor shall be responsible for site-work-coordination with the General Contractor, Owner/Representative, and any other applicable trades necessary to efficiently and effectively complete the scope of work.

It is the responsibility of the Contractor to promptly identify, in writing, any requirements that the Owner is responsible for prior to installation.

Job box / Trailer / Site Storage requirements must be negotiated with the Owner upon contract award.

All work may be completed during daytime hours.

Contractor will work with the district to ensure compliance to all security procedures and policies: Building Access/Card Access and any supervision requirements.

## **21060**

### **Training and Warranty**

The selected Data Contractor is responsible for conducting a training session for School selected employees who interface with the management/maintenance of the Audio Enhancement systems represented in this RFP.

The Contractor's response is required to provide all warranties afforded in association with the products required by this document. All rights and responsibilities associated with these warranties must be included in the response for each system.

The Structured Cabling System Warranty (If Applicable): 25 Year product and application assurance warranty from PANDUIT must be provided to the Owner upon completion of the certified work and prior to final payment. The following outlines the parameters of the Warranties: Product warranty and application assurance.

Quality Assurance: PANDUIT® Certification Plus<sup>SM</sup> System Warranty

A *Certification Plus* System Warranty shall provide a complete system warranty to guarantee end-to-end high performance cabling systems that meet application

requirements. The guarantee shall include cable and connectivity components and have one point of contact for all cabling system issues. The system shall be warranted for a period of at least 25 years.

This guarantee is made in lieu of and excludes all other warranties, expressed or implied. The implied warranties of merchantability and fitness for a particular use are specifically excluded. Neither seller nor manufacturer shall be liable for any other injury, loss or damage, whether direct or consequential arising out of the use of, or the inability to use, the product. Before using, user shall determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith. The foregoing may not be altered except by an agreement signed by officers of seller and manufacturer.

**Contractor will support all installed systems for 1-year beyond owner acceptance for both parts and labor which is separate from any manufacturer product or application assurance warranties.**

## **21070**

### **Project Management and Quality Assurance**

The Project Manager's role is to oversee and coordinate all aspects that insure the project will be successful.

The Project Manager shall be the single point of Contact representing the Contractor to the Client/Representative.

The Project Manager is responsible for all materials ordering and coordination, insuring that the correct materials are on the jobsite at the correct time.

The Project Manager is responsible for coordination with other Contractors on all site issues that affect their work.

The Project Manager is responsible for manpower scheduling & manpower projections to insure the correct people and quantity of people are on the jobsite at the correct time.

The Project Manager is responsible for all change order preparation and submission as well as all billing preparation and review as detailed within this document.

It is a requirement of the Project Manager to attend all status/coordination meetings associated with their work or installation including, but not limited to: General Contractor's meetings, technology status meetings, client/representative meetings, or

any other meetings that may be required to facilitate the installation described in this scope of work.

The Project Manager is responsible for quality inspections throughout the installation period to insure that the project meets (at minimum) the level of quality required.

The Contractor shall submit to Client/Representative a document guaranteeing that the entire installed system meets all specifications in this document. This document shall also guarantee that the installed system is free of all defects.

The Contractor must provide all test results performed to verify installed performance of all systems.

## **21080**

### **Contractor's Responsibility and project dates**

It is the Contractor's responsibility to read and thoroughly understand the contents of this document, any associated / required documents, the General Contractor's building construction (if applicable) and its constraints, as well as any requirements in responding with pricing or providing services to Owner. The Contractor's response and pricing shall be accepted as complete. There will be no additional fees for the work described by this process.

**The RFP response is due by 2PM on January 12, 2018 to the District Office either by sealed envelopes or via email to Bob Callaghan. ([callaghanb@newton.k12.ia.us](mailto:callaghanb@newton.k12.ia.us))**

It is the responsibility of the contractor to contact Bob Callaghan via email ([callaghanb@newton.k12.ia.us](mailto:callaghanb@newton.k12.ia.us)) to obtain any clarification by **4PM on December 29, 2017**. Contractor acknowledges that with a response submitted to the RFP, that they are in agreement with the project completion date and deadlines outlined in the RFP. If new construction impacts the spaces of the project scope, the technology contractor will be responsible to adhere to and coordinate with the construction schedule. Completion deadlines are to include time allowance for a final walk through, final deliverables, training and project acceptance. Contractor is responsible to obtain a project construction schedule in the case that the project is impacted throughout the new construction process and will be the basis of the bid proposal and is subject to review and potential revisions. This is the responsibility of the bidding Contractor.

## **21090**

### **BID: Requirements, Consideration, Rejection, and Acceptance Criteria**

#### **1. RFP Requirements**

It is the Contractor's responsibility to obtain any additional information that is deemed necessary to build a complete proposal and submit by either of the following options:

**Provide two (2) copies (If Delivered via Envelope)** of your proposal to Newton Community School District, 1302 First Avenue West, Newton, Iowa 50208, before **2PM on January 12, 2018** to the attention of the Bob Callaghan, Superintendent. The proposals will include a material list/labor cost breakdown and placed in a sealed envelope. Either by envelop or email option, the information requested within the Bidder Form and Signature pages in this RFP must be provided. (Section 21100, Pages 16-17)

#### **Sealed Envelope with Company Identification:**

##### **Mail or Deliver to:**

Newton Community School District Central Office  
Attn: Bob Callaghan, Superintendent  
1302 First Avenue West  
Newton, Iowa 50208

**Reference: Sound Enhancement AV Bid Package Response**

#### **Email Option with Company Identification:**

##### **Email to:**

**[callaghanb@newton.k12.ia.us](mailto:callaghanb@newton.k12.ia.us)**

**Subject Line: Sound Enhancement AV Bid Package Response**

#### **2. Consideration of Bids**

The properly identified bids will be opened and evaluated by Newton CSD following the bid submittal deadline: **January 12, 2017**. Newton CSD reserves the right to require the submittal of the Contractor Qualifications prior to the award of the project if deemed in the District's best interest.

3. **Rejection of Bids**

Newton CSD has the right to reject any or all Bids. A Bid not accompanied by the required Bidding Documents in the appropriate and clearly marked sealed envelopes, or a Bid which, in any way, is incomplete or irregular, is subject to rejection and deemed non-compliant. Newton CSD reserves the right to reject a Bid, in Newton CSD's judgment, that is not in Newton CSD's own best interest.

4. **Acceptance/Award of Bid**

It is the intent of Newton CSD to award the contract to the lowest qualified bid that is submitted in accordance with the outlined specifications. Newton CSD reserves the right to accept a Bid, in Newton CSD's judgment, that is in Newton CSD's own best interest. Selected members of the Newton CSD team responsible for the project will complete an evaluation matrix as part of the selection process.

5. **Performance and Payment Bonding**

Within two (2) days after notice of award, Contractor may be required to have a valid Performance and Payment Bond in force covering the work performed up to the acceptance by Newton CSD. The Bond must be in the amount of one hundred (100) percent of the contract amount, guaranteeing to Newton CSD the completion and performance of the work, as well as full payment of all suppliers, agents, and laborers employed in the performance of the project. The contractor agrees to keep such Bond, or a replacement thereof, in force at all times during the course of the performance under this project. Purchase order (s) will not be issued until the 100 percent payment bond is received. The cost of the performance bond, if requested by the District, will be handled as an addition to the original submitted bid response. Newton CSD holds the right to exercise or withhold which will be communicated to the contractor at the time of award.

21100

**Bidder Form and Signature**



*Newton Community School District*

**BIDDER FORM and Signature**

I, \_\_\_\_\_, having read and fully understand the requirements of this Request for Proposal to install the Data Cabling System to support the Technology Network Systems as outlined herein, do submit this bid offering, which includes all costs to the Purchaser, for the following company:

Company Name \_\_\_\_\_

Address: \_\_\_\_\_

City, State Zip \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Signature: \_\_\_\_\_

\_\_\_\_\_  
Print or Type Name

Title: \_\_\_\_\_

Dated: \_\_\_\_\_



# Base Bid Package

Total Bid for Audio Enhancement Bid Package: \$ \_\_\_\_\_ (U.S. Dollars)  
(All Base Bid Sections for a Complete Project LUMP SUM)

Material \$ \_\_\_\_\_ / Labor \$ \_\_\_\_\_ (U.S. Dollars)

Cost to Provide Performance and Payment Bond: \$ \_\_\_\_\_ (U.S. Dollars)

Company Name of Bond Provider: \_\_\_\_\_

(Bond cost may be added to the Lump Sum price at the Districts discretion)

## Breakout of Packages Contained in Base Bid

(The following Breakout prices are the individual sections contained in the Lump Sum Price above.  
District reserves the right to award any combination of one or all of the sections.)

**High School Auditorium of Performing Arts:** \$ \_\_\_\_\_ (U.S. Dollars)  
(Material, labor, and complete installation for specified system in the Auditorium)

Material \$ \_\_\_\_\_ / Labor \$ \_\_\_\_\_ (U.S. Dollars)

Name of Certified Contractor: \_\_\_\_\_

**High School Gymnasium:** \$ \_\_\_\_\_ (U.S. Dollars)  
(Material, labor, and complete installation for the specified system listed for the facilitation of sound in the Gymnasium)

Material \$ \_\_\_\_\_ / Labor \$ \_\_\_\_\_ (U.S. Dollars)

Name of Certified Contractor: \_\_\_\_\_

**Softball Complex:** \$ \_\_\_\_\_ (U.S. Dollars)  
(Material, labor, and complete installation for specified system at the softball complex)

Material \$ \_\_\_\_\_ / Labor \$ \_\_\_\_\_ (U.S. Dollars)

Name of Certified Contractor: \_\_\_\_\_

Signature: \_\_\_\_\_

\_\_\_\_\_  
Print or Type Name

Title: \_\_\_\_\_

Dated: \_\_\_\_\_



## **Section 27000 – Communications**

### **27110 Final Deliverables**

Contractor is responsible to provide Newton CSD with the following information and documentation:

#### As Built Documentation

- Upon completion of the project, Contractor is to prepare "As Built" documentation showing actual site conditions and installation as constructed.
- Provide copies of such documentation to Newton CSD as mentioned above.

#### Additional Records

- In addition to the engineering diagrams, the following items shall be provided by the contractor:

Cable Records and Assignments (Infrastructure and Systems labeling)

Test results

Provide PANDUIT Warranty to Newton CSD (If Applicable)

### **27150 Audio-Video System (Base Bid Section)**

Provide all labor and material necessary to install a complete each of the site specific projects to complete the District Sound Enhancement RFP scope of work. Any electrical needed to complete the power feed to the system will be the responsibility of the school district separate to this contract. Contractor will need to coordinate with NCSD to integrate desired systems and establish timing expectations. The material list and product details are contained within this specification section.

All audio-video systems will be the specified District standard. no exceptions allowed without authorization prior to the bid due date and time. The installation must be performed by a certified installer/contractor.

#### **27150-1 Audio-Video System: Auditorium Sound System**

The following outlines the requirements to improve the sound reinforcement system in the high school Auditorium to provide a high-performing experience by upgrading the existing aging sound system.

Contractor must include all costs of removal and disposal for the entire existing main speaker system and rack equipment to be replaced with a Worx line array system.

Contractor must provide full coverage of the space: two X2 line array speakers will be installed on either side of the proscenium. A dual 18" subwoofer will be installed in the place of the existing speaker system with a V5 down fill speaker to be mounted below which will supplement audio coverage for the first few rows of the auditorium.

System solution must provide complete audio coverage for each of the circular pods within the auditorium; a single Worx Audio 12" speaker will be installed just in front of each pod. Provide a house Left delay speaker which can be configured depending on the need dictated by the direction of the rotating room; this will prevent the speaker from blasting sound directly into a curved wall when closed off to the room.

In the sound booth, an Allen and Heath 48 channel audio console will replace the existing Mackie desk. It will be paired with a Dante card to provide full functionality of that technology. All microphones in booth will connect to the console via the new Dante network.

In the booth equipment rack contractor will mount a BSS audio processor and Dante bridge which will be installed to allow the new speaker system to be properly tuned to the room.

Contractor must tune the sound system including any adjustments needed through the signal processor to achieve uniform response of the speakers over the listening area with minimal distortion, maximum intelligibility, and best available sonic imaging to the best of the system's capability.

A BSS controller will be installed in order to control the speaker system in the different room configurations and will control the volume of the studio monitors.

Dante enabled Ashly amplifiers will be provided as part of the new system providing adequate signal power. A smaller Ashly amplifier is specified to be added to power the existing rotating room speakers. These speakers will not be tied into the main room audio feed.

Two 8" coaxial studio monitors will be installed near the mixing location and verified placement with the District personnel responsible for Auditorium productions. These will be tied into the main processor for setting proper delay and EQ to match the main speaker system.

Primacoustic acoustic panels will be provided to replace the existing foam panels. 6 panels will be installed on the walls around the audio console, and 3 panels will be installed in a cloud format above the desk to maximize the mixing experience.

An additional Shure ULXD receiver must be installed to allow all previously purchased microphones to be used simultaneously.

A new 10RU rolling shock rack will be provided to safely house the wireless microphone system. To protect the expensive microphone system when in a mobile environment contractor must use a 'shock rack' to meet the requirements of this application.

Furman power sequencing will be installed to properly power the system on and off each time eliminating the possibilities of unwanted popping due to an incorrect power sequence.

A Worx speaker will be mounted behind the proscenium to provide a permanent stage monitor. The existing two monitors will remain utilizing the existing QSC amplifier allowing for ease of replacement in the future.

Two steerable ceiling array microphones will be flown above the platform. They must provide 9 channels per microphone of signal into the sound board via Dante.

Two 16 input and 8 output digital snakes will be included to provide audio connectivity on the platform. A single shielded CAT6 cable will be pulled from the audio console to the right stage wing. The two snakes will then connect to each other providing a total of 32 inputs and 16 outputs on the platform.

As part of the proposal, contractor must include the specified additional wired microphones and XLR cables for use around the room.

Spec.

- Qty. 2 Presonus Commercial X2i-PAS to be installed inside of proscenium
- Qty. 1 Presonus Commercial TL218SSi to be installed behind the front cloud scrim
- Qty. 1 Presonus Commercial V5 Passive Speaker will be installed below the subwoofer providing audio coverage for the front few rows
- Qty. 2 Presonus Commercial Waveseries 12A Passive speakers will be installed in front of each rear seating pod
- Qty. 1 Presonus Commercial V5M Passive speaker to be installed behind the front scrim to provide a permanent stage monitor.
- Allen-Heath SQ-6 Audio Console
- Allen-Heath Dante Card
- Allen-Heath AH-DX168 Stage box to be placed on the platform
- BSS BLU-100 Audio Processor
- BSS BLU-DAN Dante to BLU link bridge
- BSSEC4BV-BLK Ethernet Controller
- Sound tuning by a Smaart Certified AV Technician
- Qty. 2 Ashly nXe 13.04 Amplifier with Dante Card
- Qty. 1 Ashly nXe 1502 Amplifier with Dante Card
- Qty. 1 Ashly nXe 8004 Amplifier with Dante Card
- Qty. 2 Presonus S8 Studio Monitors
- Qty. 1 Primacoustic F102-2448-00 Acoustic Panels (6)
- Qty. 3 Primacoustic Z840-1200-00 Black Acoustic Clouds

- Shure ULXD4Q Wireless Microphone Receiver
  - SKB 3SKB-R10U20W Shockmount Equipment Rack
  - Furman CN-2400S Power Sequencer
  - Qty. 4 Furman CN-20MP Power Sequencing Units
  - Middle Atlantic UPS-S1000R
  - Qty. 2 Shure MXA910W Ceiling Array Microphones to be mounted above the platform
  - 24 Port Managed Gigabit Network Switch with POE (HP 2920-24G, Model: J9726A) or equivalent to integrate with the current management/monitoring platform.
  - Qty. 12 25' XLR Cables
  - Qty. 12 50' XLR Cables
  - Qty. 10 Shure SM58 Microphones
  - Shure DMK57-52 Instrument Microphone Kit
  - 300 feet of Belden B9451P Audio Cable
  - 1000 feet of Belden B1313A speaker cable
  - 1000 feet of Crestron DM-CBL-8G-P/F
  - Neutrik Speakon NL4 Connectors
- (Including all Shipping, Design, Installation and Commissioning)

**27150-2 Audio-Video System: Gymnasium Sound System**

The following outlines the requirements to improve the sound reinforcement system in the high school gymnasium for Newton Community School District. Contractor must include the labor and disposal costs within the bid response to abate all existing speakers and amplifiers that will be removed and replaced with the new Worx Audio loudspeaker system.

In order to provide full range sound to every spectator in the room, four Worx X2 Line Array speakers will be installed in the center of the gymnasium focusing sound at each of the four spectator areas.

Two subwoofer speakers will be installed in the center of the speaker cluster to provide low frequency sound support for the entire space.

A single 12-A speaker will be installed to provide audio coverage for the court surface.

An iPad Pro will be installed in a table top stand on the score table to provide system control during sporting events.

A Shure Dante input box will be installed below the table providing 4 auxiliary audio inputs all over a single Ethernet cable.

A BSS audio processing must be included to allow the new system to be properly tuned to the room while providing automated volume control of microphones when the scoring table is not in use. The processor will be paired with a wall controller providing user selectable room configurations.

Contractor must tune the sound system including any adjustments needed through the signal processor to achieve uniform response of the speakers over the listening area with minimal distortion, maximum intelligibility, and best available sonic imaging to the best of the system's capability.

A BSS Dante bridge must be included to allow all audio through the system to be transferred through network cable; keeping the signal digital all the way from the microphone to the speaker to eliminate any possible audio latency or interference in analog signals.

Four channels of Shure ULX-D wireless microphones will be provided by the contractor to facilitate this space, along with one ULX-D handheld transmitter. (Expansion capabilities are mandatory for up to three additional) Contractor must ensure that the new receiver will be capable of pairing with the previously purchased auditorium microphones.

A new antenna distribution system will be installed in order to ensure seamless wireless coverage throughout the entire gymnasium. (According to District Standard)

Ashly amplifiers will be provided to adequately power the new speakers. All amplifiers must have Dante digital audio inputs to allow the signal to stay digital from the source to the speaker.

Power sequencing must be provided to ensure proper power-up and power-down cycles whenever the system is used. The system must be designed to prevent any undesired popping coming from the speakers by the system power cycling in an incorrect order.

A UPS battery backup system equipped with a network interface card must be provided to protect critical audio equipment installed in the rack. Examples of Critical Processing Devices include Audio Consoles and System Processors.

Spec.

- Qty. 4 Presonus Commercial X2i-PAS to be installed in center of gym firing at all 4 seating sections
- Qty. 2 Presonus Commercial TL218SSi to be installed in a stack reverse firing configuration in the center of the X2 array
- Qty. 1 Presonus Commercial WaveSeries 12A Speaker will be installed in the center of the gym providing audio coverage for the court surface
- BSS BLU-100 Audio Processor

- BSS BLU-DAN Dante to BLU link bridge
  - Sound tuning by a Smaart Certified AV Technician
  - Qty. 4 Ashly nXe 3.04 Amplifier with Dante Card
  - Qty. 1 Ashly nXe 8002 Amplifier with Dante Card
  - 12.9 Inch iPad pro on lockable table top mount with custom Interface to control BSS Processor
  - Shure ANI4IN-XLR Dante Audio Interface
  - Shure ULXD4Q Wireless Microphone Receiver
  - Shure ULXD2/B58 Handheld Transmitter
  - RF Venue DFINB Antenna
  - Qty. 2 Shure UA850 Antenna Cables
  - Furman CN-2400S Power Sequencer
    - o Sequencing will be controlled from the BSS Processor GUI
  - Qty. 5 Furman CN-20MP Power Sequencing Units
  - PL-8C Furman Power Conditioner
  - Middle Atlantic UPS-1000R-8IP (includes the network interface card, part# UPS-IPCARD)
  - 24 Port Managed Gigabit Network Switch with POE (HP 2920-24G, Model: J9726A) or equivalent to integrate with the current management/monitoring platform.
  - Wireless Access Point (District Provided to ensure integration with District Standards for the operating/management system (OS))
  - 300 feet of Belden B9451P Audio Cable
  - 1000 feet of Belden B1313A speaker cable
  - 300 feet of Crestron DM-CBL-8G-P/F
  - Neutrik Speakon NL4 Connectors
- (Including all Shipping, Design, Installation and Commissioning)

**27150-3 Audio-Video System: Softball Field Sound System**

In order to provide all spectators with high quality full range sound, a single Worx Audio XL2 speaker will be properly installed centered on the roof of the new press box. It is the desire and intent of the District that through the use of a single speaker system, that we will eliminate any audio phasing issues that has been present with a multi speaker solution.

Sound system tuning must be included to allow the speaker to produce the best possible sound for the environment.

Contractor is responsible for tuning the sound system which involves adjusting the signal processor in order to achieve uniform response of the speakers over the entire listening area with minimal distortion, maximum intelligibility, and best available sonic imaging to the best of the system's capability.



An Apple iPad Pro will be installed on a table top stand within the press box on top of the counter. This iPad will be the main control interface for the system, allowing control of volume commands of all audio inputs as well as control of the main system power.

A rolling equipment rack will be provided and placed within the press box to house all the new AV equipment and also allowing the flexibility to be moved within the pressbox.

The BSS BLU-100 system processor is allows control of all audio inputs. This processor is capable of handling up to 12 inputs and 8 outputs allowing for future growth. Two auxiliary audio inputs will be provided to allow sound from a phone or computer to be played through the sound system.

Two Shure QLX Microphones will be installed in the booth. Each of these microphones will be paired with a Shure Handheld transmitter. The system will be setup to allow for two additional wireless microphones to be easily installed for future growth.

Wireless antenna distribution must be included to provide wireless coverage throughout the entire softball stands area.

Worx Audio amplifiers will be installed in the equipment rack to provide adequate power for the Worx Audio XL2 speaker.

A Furman power sequencer must be provided to power the distribution and sequencing for AV equipment. The system must prevent any unwanted speaker popping due to an incorrect power cycle.

A 16 port network switch (matched to District Standard) and wireless router (matched to District Standard) must be included to allow for wireless control of the new sound system.

#### Spec

- Qty. 1 Presonus Commercial S-XL2 Weatherized outdoor loudspeaker installed on roof of press box
- Qty. 2 Presonus Commercial PDA-1000R Amplifiers
- BSS BLU-100 System Processor
- Sound tuning by a Smaart Certified AV Technician
- 12.9 Inch iPad pro on lockable table top mount with custom Interface to control BSS Processor
- Qty. 2 Shure QLXD24 Handheld Wireless Microphone system
- RF Venue DISTRO4 Antenna Distribution Unit
- RF Venue DFINB Antenna
- Furman CN-2400S Power Sequencer
  - o Sequencing will be controlled from the BSS Processor GUI

- 15RU Strong FS Series Rack System with DC Fans - SR-FS-SYSTEM-DC-15U
  - 8 Port Managed Gigabit Network Switch with POE (HP 2520-8-PoE, Model: J9137A) or equivalent to integrate with the current management/monitoring platform.
  - Wireless Access Point (District Provided to ensure integration with District Standards for the operating/management system (OS))
  - 150 feet of Belden B9451P Audio Cable
  - 400 feet of Belden B1313A speaker cable
  - Neutrik Speakon Connectors
- (Including all Shipping, Design, Installation and Commissioning)

**27190** PANDUIT technical and product specification reference:

For the PANDUIT TX6 and TX6A Solution technical specifications and individual information sheets on the PANDUIT products, please go [www.PANDUIT.com](http://www.PANDUIT.com). PANDUIT which provides unprecedented performance for key parameters such as insertion loss and all forms of crosstalk, both within and between channels, yielding improved bandwidth, data throughput and network efficiency. Engineered with customers in mind, PANDUIT products deliver the design, speed and intelligence you need to take your business further.

The PANDUIT TX6A Solution has been specifically engineered with enhanced cable and connector performance designed to support 10 Gb/s Ethernet requirements. Using patented technology and the scientific capabilities of PANDUIT Labs, this solution exhibits far superior channel performance than legacy solutions, and innovative engineering techniques to meet the specific demands 10 Gb/s brings to the physical layer. The PANDUIT TX6A 10GIG Solution delivers next generation support by providing bandwidth that is extended out to 500 MHz with guaranteed Alien Crosstalk performance to ensure proper network performance.

Complete PANDUIT specifications to the District Standard will be provided upon request. It is the responsibility of the contractor to ensure compliance reflected in all parts and installation procedures to uphold the afforded warranties from a certified installer.

**27220** Project Maps/Drawings/Symbol Key (If Applicable)